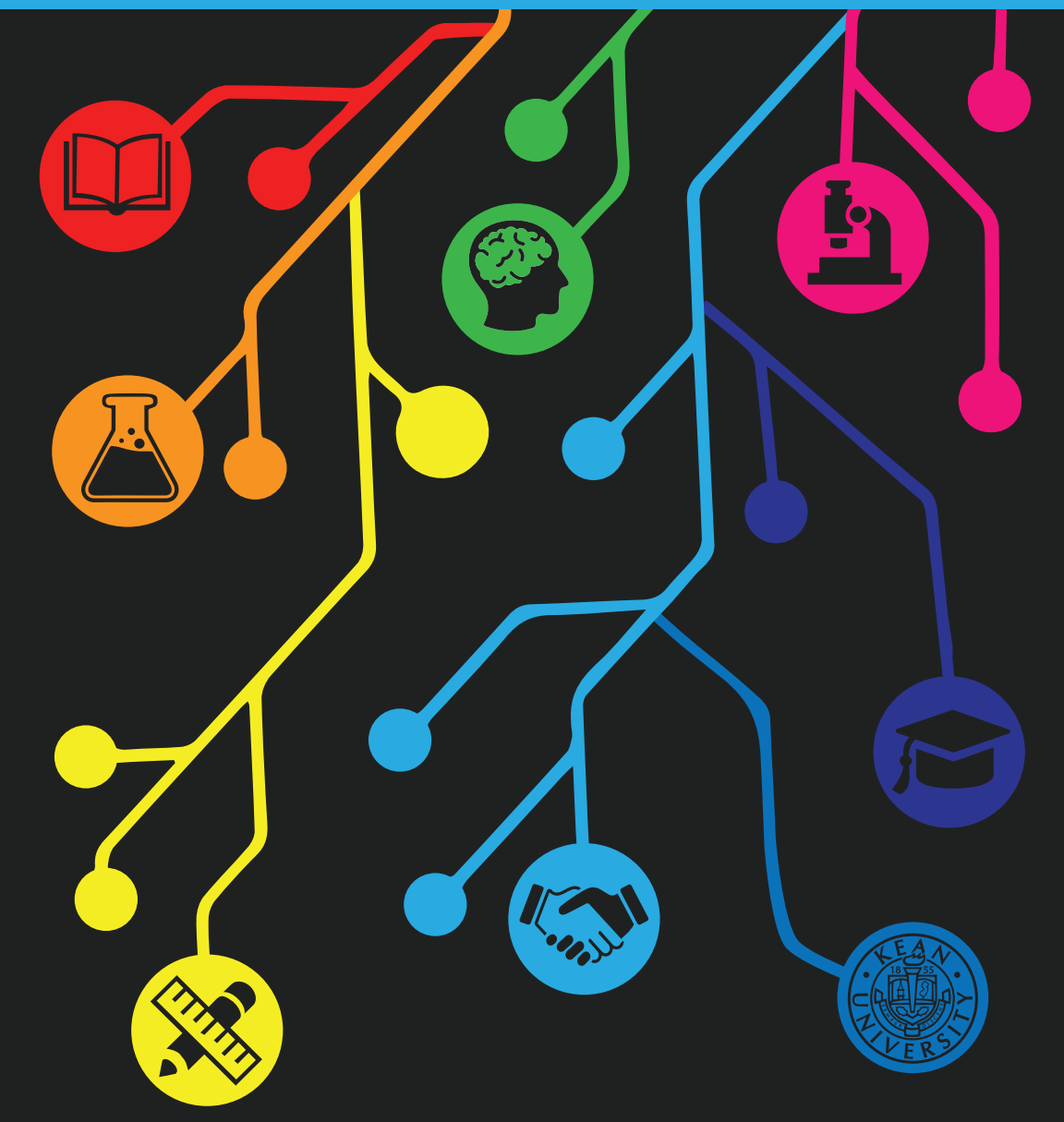
KEAN UNIVERSITY

RESEARCH DAYS 2020



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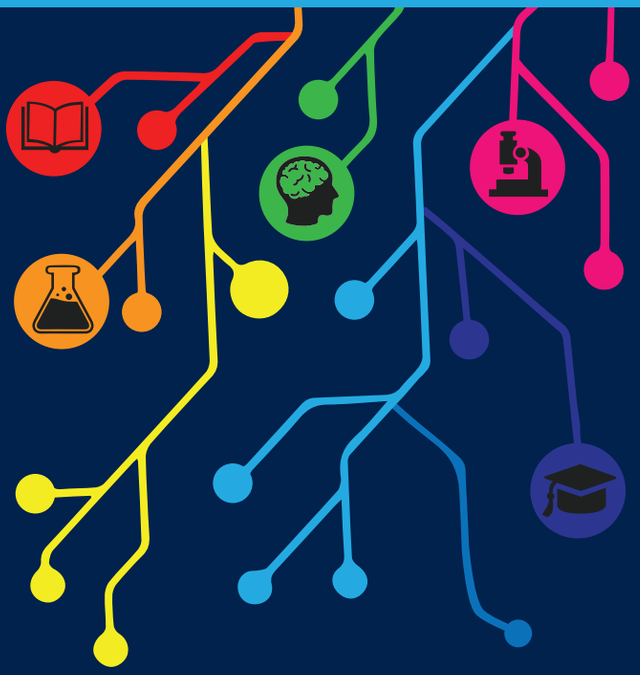


2020 KEAN RESEARCH DAYS

INTRODUCTION AND WELCOME MESSAGE

Jeffrey H. Toney, Ph.D.

Provost and Vice President for Research and Faculty

This year, I welcome you to a virtual Research Days experience instead of the in-person communal celebrations of past—years, just one small example of how the worldwide coronavirus pandemic has changed our lives. The pandemic has been a sudden and extraordinary shock to our society, to our economy, to almost all aspects of life we took for granted a few months ago. Many of you, especially our graduating seniors, may feel you have had to put your dreams on hold. But every crisis brings new opportunities. Once the virus subsides, as it will, I know that you will pursue your dreams with courage and determination. Now more than ever, the world needs creative problem solvers — health care workers to treat the sick; scientists to help find new cures; economists; business leaders and politicians to inform new policies to bolster the economy, and artists, musicians and writers to remind us of the resilience and beauty of human nature. During your time at Kean, you have learned critical thinking skills — essential to deal with the profound changes that will inevitably result from this pandemic. Do not be derailed. Do not be afraid. You are equipped for the challenges ahead, and I am confident that you will help lead the way.

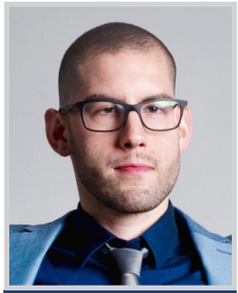
On Opening Day this year, President Farahi informed the campus community that after 17 years, he will serve his last year as president in 2020. One of the many accomplishments during his transformational tenure is the remarkable growth across the University in faculty-mentored student research. In 2004, President Farahi started the Students Partnering with Faculty summer research program. Through this program, over 430 students have worked with faculty on high-quality research projects. Just this year, President Farahi launched the Freshman Research Initiative to involve students in faculty-mentored research during their first year on campus. The Center for Undergraduate Research will open later this year on the third floor of the Nancy Thompson Learning Commons to provide a central place for students to learn about research opportunities. The amazing growth in student participation in Research Days, from 90 students in 2009 to over 1,700 students this year, reflects the vibrant level of student research activity on campus. Such a high level of student engagement in research is a long tradition at great institutions such as MIT, where I concurrently serve as a Visiting Professor in the Department of Linguistics and Philosophy.

Our students continue to impress with their achievements. Join them (virtually) during Research Days to experience firsthand the exciting research environment at Kean. Let's celebrate! audience today will be inspired by Rachel Louise Snyder's story and will start on a path that changes our world. "Why?" is a very good question. "Why not?" may sometimes be a more important one.

Jeffrey H. Toney, Ph.D.
Provost and Vice President for
Research and Faculty

2020 KEAN RESEARCH DAYS

SPECIAL GUEST SPEAKER



David Garcia

Ph.D. Candidate, Brown University

2014 Kean University Alumnus

The place where it all began

In the video message he prepared for Research Days 2020, David describes his journey from his first day at Kean University to a Ph.D. program at Brown University.

David Garcia is a scientist, motivational speaker, and a model born to Colombian immigrants with a rare neurological condition called Moebius Syndrome. He earned a B.A. in Chemistry and B.S. in Biology from Kean University, where he participated in the McNair Scholars program, performing research under the mentorship of Provost Jeffrey Toney. While at Kean, he participated in summer research programs at The Johns Hopkins School of Public Health and Brown University's Department of Chemistry. These experiences were career orienting and motivated him to continue his education. He pursued a Ph.D. in Chemistry at an Ivy League institution, Brown University where he studied the effect of oxygen on the metabolism of lung epithelial cells and was awarded a prestigious fellowship from the National Institutes of Health. In May, 2020, David will defend his thesis and will be the first in his family to earn a Ph.D.

2020 KEAN RESEARCH DAYS

FACULTY RESEARCH MENTOR OF THE YEAR

Edward Johnston, MFA, M.Ed.

Associate Professor

Robert Busch School of Design

Michael Graves College

This year's honoree, Prof. Ed Johnston, has led his student mentees to do extraordinary work resulting in prestigious accolades. There is no better evidence of his commitment than the student-driven "Liberty Hall 360: Revolutionary Wedding" immersive film project, which has won the international MarCom Platinum Award for virtual reality (VR) and is currently nominated for a 2020 New York Emmy Award.

The Liberty Hall 360 project was written and produced by Kean students under the guidance and supervision of Prof. Johnston and Prof. Henry Stankiewicz of the Robert Busch School of Design in the Michael Graves College; Dr. Jonathan Mercantini and Dr. Elizabeth Hyde in the Department of History and College of Liberal Arts; William Schroh Jr. and Rachael Goldberg of Liberty Hall Museum; and the University's Director of Digital Media Production Emmanuel Vozos. The project was directed by Johnston and Vozos with a cast and crew of students, alumni, faculty, staff and neighbors of Kean. Johnston prioritized the development of student educational opportunities, elevating students into key team positions, inviting their input and establishing high expectations for quality work. All of the students working on this project have "Nominated for a NY Emmy" on their résumé before they graduate.

The mentoring of both research and creative work of his students has led to international publications online and in print, including in Distinguished Professor Robin Landa's prestigious book *Graphic Design Solutions* and many presentations such as at the International Symposium for Electronic Art, Design Incubation, UCDA Design Education Summit, and the Haworth Corporation.

Prof. Johnston also has had great success cultivating organic collaboration across academic and administrative units. Johnston and Prof. Denise Anderson have developed and published on "Proto-Portfolio," a research process in which students are guided to continuously validate projects through their courses with a special focus on developing integrated brand experiences for their final graphic design portfolios.

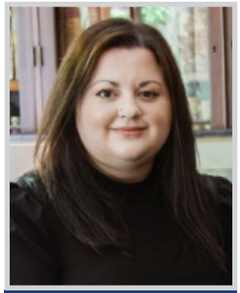
Johnston launched a new Research and Development course in the graphic design program with students from the first year to the fourth who are interested in design research. Projects include: a 360-degree VR walk-through experience of the Michael Graves residence; the Arbor Experience at Kean University with Professor Daniela Shebitz and Botany students; Michael Graves Exhibit in China; and several initiatives from the Nantucket Historical Association (NHA). Johnston is partnering with colleagues in the Design Studio Practicum course and Associate Dean Rose Gonnella using his expertise in immersive design to create projects for the NHA, such as: Whale Rescue Experience, Harbor Visualization (headset experience), and projected experiences in historic houses. The projects created for and in partnership with the NHA have led to internships in Nantucket in Summer 2020 for two design students.

Johnston taught and mentored John Weigele in obtaining an internship at the high-powered immersive design studio: Local Projects, NYC. John is now a Walt Disney Imagineer in Immersive Experiences at Hollywood Studios, Disney World. Johnston's research mentees have won international competitions, including Liam Elias '19, who won the best overall portfolio in the Animation/Visual Effects category for the Young Ones Student Awards, one of the world's most acclaimed student design competitions. Liam also won in the Design for Good category for his 3D animated short *Hugo*. These awards ranked Kean University in the top three internationally in the Young Ones Portfolio College Rankings, tied with the Royal College of Art, SCAD, and MICA. Also, Kean University was ranked in the top 20 for the overall Young Ones Competition. Liam graduated last May, and has a position at Gentleman Scholar, a top-tier creative production studio. Liam's latest work can be seen in Target's "Through the Bullseye" advertising campaign.

Johnston's students learn to approach their projects through a design thinking methodology while developing lifetime learning habits essential for any creative professional.

2020 KEAN RESEARCH DAYS

UNDERGRADUATE RESEARCH AWARD



Nicole Skalenko

Senior,
Honors History
Major

Nicole Skalenko, a senior history honors student and an intern at the Liberty Hall Academic Center Historic Research Library, is a tireless researcher and scholar whose findings and analysis have earned prizes at national conferences, been published on major historical websites, and been recognized by active scholars for their original contribution.

Nicole is one of a handful of Kean students to participate in all three years of the National Endowment for the Humanities funded project, *William Livingston's World*. In fall of 2018, Nicole was part of the Research Recruits program and began working with faculty mentor Dr. Elizabeth Hyde on the project. Nicole became interested specifically in William Livingston's work as a propagandist during the American Revolution. She built a web-based timeline that has made it possible for future scholars to find Livingston's writings gathered into a single digital resource. This research was the foundation of the collaborative work she did with fellow history honors student, Victor Bretones, on the role of print in the Revolution, which led to an invitation to contribute the Columbia University Libraries blogpost to the John Jay papers.

Nicole was part of a team of undergraduates selected to participate in the American Historical Association's Undergraduate Poster Panel in New York in 2020. She was selected to present her work at the Macksey Humanities Symposium at Johns Hopkins University this May. Last year, she was among the honorees from the Kean history program awarded "Outstanding Student Researcher" at the Humanities Education and Research Association Annual Meeting in Philadelphia for her explorations of William Livingston's World.

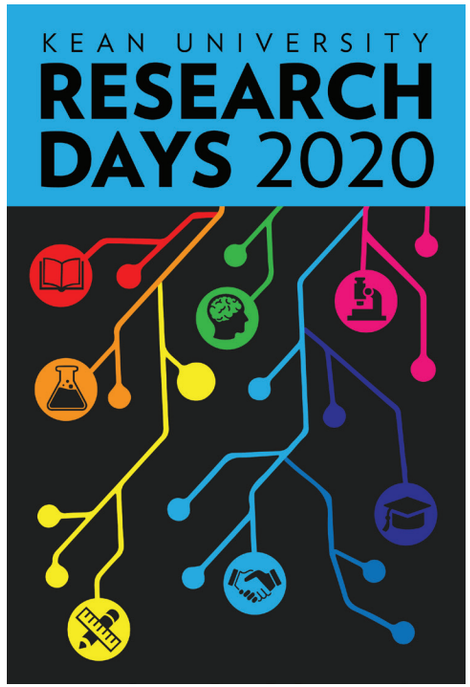
The Special Collections Research Library and Archives selected Nicole for a Summer 2019 internship to help with the monumental move of 900+ feet of fragile and unique collection material. Nicole can fluently read 18th-, 19th-, and 20th-century script, a skill quickly becoming akin to a foreign language. She can also understand, summarize, interpret, analyze and evaluate documents. Her primary-source literacy creates thorough and interesting research papers and talks and is a huge benefit to students who visit the Research Library.

In addition to these traditional research efforts, Nicole has used social media, such as her Instagram and Twitter accounts as William Livingston, to engage with scholars, historians, and others on the broad range of William Livingston's World. She has over 100 followers on her William Livingston Twitter account and over 1,000 followers on her William Livingston Instagram page. She has also used social media to develop her own academic network, in which she has been granted access to manuscript materials and worked directly with other leading scholars.

2020 KEAN RESEARCH DAYS

COVER DESIGN AWARDS

WINNER



Alysia Kane
Senior, Graphic Design:
Interactive Print and Screen Major

Program Book
Cover Design Award 2020
The Office of Research and Sponsored Programs in collaboration with the Robert Busch School of Design (RBSD) hosts a program cover design contest for Research Days. All RBSD students were encouraged to submit designs that visually represent the essence of research and creative work.

Alysia Kane, the winner of the Research Days 2020 Cover Contest, is a senior at Kean University studying Graphic Design: Interactive Print and Screen, and Art History as a minor. She is a dedicated designer who loves to tell the deeper story to deliver a project that immediately has the viewer hooked in and wanting more. This may come from her journalism background and her love of research.

Alysia has worked on multiple design projects during her time at Kean University. While she was an intern at the Design Studio Practicum, she designed the poster and additional promotional materials for the Michael Graves College Fall 2019 Lecture Series. While at the Design Studio, she was given the opportunity to work for nonprofits like Community Food Bank of New Jersey and PFLAG to create social media content and brand identities.

Robert Busch School of Design Professor Denise Anderson selected Alysia to be a part of a small team to develop the online website, MGCSync. The site is being expanded to be a recruitment tool to help the students of the Michael Graves College bridge the gap between their college careers and the workforce. The hope is to make MGCSync a place that students and recent graduates can connect with industry professionals looking to recruit. Alysia was selected to help document this process by writing from a student's perspective, discussing how a tool like this could make a major difference for the future graduates of Michael Graves College.

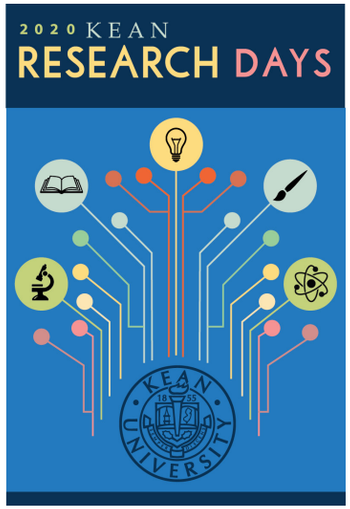
During one of her summer internships, Alysia worked for Valley Printing and Graphic Design in Westwood, NJ. She was given the incredible opportunity to work on a tattoo flash book for Kyle Jeffas and the renowned tattoo artist, Bowery Stan. The book was created to showcase Bowery Stan's original sketches, and then the merging of their styles, as Kyle took inspiration from the sketches and brought them to a more finalized illustration. The book was published as a limited edition run, and was sold at Inked Out NJ in 2019.

Currently, Alysia is working on design assets for this year's Research Days and templates to be used for next year's event. She looks forward to all the possibilities the future will hold for her.

2020 KEAN RESEARCH DAYS

COVER DESIGN AWARDS

HONORABLE MENTIONS



Jessica Heider
Senior, Graphic Design:
Interactive Advertising Major

Ray Hogrelius
Senior, Graphic Design:
Interactive Advertising Major

Jessica Heider, who received an honorable mention in the Research Days 2020 Cover Contest, transferred to Kean University after completing two years at County College of Morris. When Jessica first arrived at Kean, she noticed a marked shift from county college. Jessica credits Kean with encouraging her to push boundaries and improve her skills. Even when she thought something was as good as it could get, her professors encouraged her to rework it and make it even better. Although sometimes frustrating, in actuality it made the final product better than she imagined. Without that extra push, Jessica feels much of her work would never be where it is now, and she has grown not only as an artist but also as a person.

Jessica's Research Days 2020 cover design is an example. Her original design started off relatively basic, utilizing little to no color. With some creative feedback from her professors, she delved deeper into the true meanings and goals of research. Jessica decided it was important to represent all aspects of learning and the different kinds of research that are being conducted. She symbolized those different ways of thinking and learning by the addition of many different colors. Those colors repeat, representing the truth that despite the different approaches we research and learn, our experiences are actually quite similar.

Ray Hogrelius, who received an honorable mention in the Research Days 2020 Cover Contest, is a Senior Graphic Design student at the Robert Busch School of Design in the Michael Graves College at Kean University. He is a passionate and joyful individual who tries to bring his personality to others through his design.

For this year's Research Days cover, Ray used an isometric viewpoint to show simplicity and balance between all programs at Kean. The three-dimensional icons show some of the tools used by every researcher to show we all go through the same process. The school names, icons, and typography are laying on different planes to convey the sometimes chaotic nature of getting projects like these completed — but they all come together in a series of steps that lead to positive outcomes.

Cover design isn't Ray's only creative ability. He creates and designs strong user interface/user experiences for mobile apps that can aid in making everyday life a little easier. As a sports fanatic, Ray hopes to one day work for any of his favorite teams and potentially become the graphical face of any team that will be lucky enough to hire him.

FACULTY RESEARCH PRESENTATION ABSTRACTS

Denise Anderson, Alysia Kane (Student), Jacqueline O'Connor (Student), Logan LeBuis (Student), Pranav Desai (Student)

Robert Busch School of Design, Michael Graves College

"MGC SYNC: A Digital Networking Alternative That Connects Students and Industry Professionals"

Studies have shown that undergraduates who are given support and who build professional relationships through networking increase their odds of getting a job offer and a higher salary upon graduation. Public colleges and universities, however, often lack the tools that enable students to network in their target industries. To provide this kind of foundational support for students attending the Michael Graves College, Denise Anderson led the development of MGCSync.com, a digital networking tool specifically created to provide design students with a platform to showcase their projects, skills and other relevant information. Anderson and her team will present Phase II of MGC Sync which includes improvements based on Phase I outcomes.

Salvatore Coniglio and James Merritt

New Jersey Center for Science, Technology and Mathematics

"Using CCR1 Antagonists to Target Tumor-Associated Macrophages in Glioblastoma"

Glioblastoma multiforme (GBM) is the most aggressive form of adult brain tumor, with a median survival time of 12 months. GBM is highly resistant to conventional therapy. GBM tumors are heavily infiltrated with macrophages, which are known to stimulate GBM cell invasion. Compounds that inhibit macrophages, such as pexidartinib (PLX3397), can inhibit GBM invasion in vivo. Here we show that targeting CCR1 using novel antagonists are also able to block macrophage stimulated glioblastoma invasion in-vitro. We also demonstrate a potential molecular mechanism involving CCL3 upregulation in macrophages and myosin II contraction. Future goals will be to generate compounds increase efficacy and ability to penetrate the blood brain barrier.

Denise Gemmellaro, Marie Joseph (Student), Laura Osinki (Student)

School of Natural Sciences, The Dorothy and George Hennings College of Science, Mathematics and Technology

"Potential of Medico-Legal Forensic Entomology and its Contribution to Criminal Investigations"

Forensic entomology is the application of entomology, the study of insects and arthropods, to legal investigations. Medico-legal forensic entomology is the use of insects and arthropods recovered on a dead body to help the investigators estimate time of death, post-mortem movement of the body, and detect the presence of drugs or other substances in the corpse. Medico-legal forensic entomology has offered major contributions to the field of forensic science, and it is currently being implemented in routine CSI and crime labs operations. The purpose of this work is to discuss the importance of medico-legal forensic entomology focusing on the research that has been conducted and how it has applied to the resolution of real criminal cases.

Keri Giordano, Ayal Goldberg (Student), Giuliana Stillo (Student), Victoria Interra (Student), Vanessa Vega (Student)

School and Clinical Psychology, Nathan Weiss Graduate College

"Expulsion in New Jersey Community Childcare Centers: A Statewide Examination"

Early childhood suspension and expulsion has received national attention since Gilliam (2005) found that preschool children are more than three times as likely to be expelled than their high school counterparts. New Jersey licensed community childcare centers were invited to participate in a survey describing suspension and expulsion policies and practices. Data collected from these surveys will be presented. A general overview and the impact of programmatic factors (administrator experience and education, QRIS participation, accreditation status, staff: child ratios, feelings about policies) and racial characteristics (child and administrator) on expulsion will be examined. Implications and areas for future research will be discussed.

Min-Chung Han, Dan Wei (Susie) Yang (Student)

School of Management and Marketing, College of Business and Public Management

"Boosting Financial Literacy for Millennials: Learning through Instant Messaging Chatbot"

Most millennials are not well equipped with financial literacy. One third of young people do not have knowledge of interest rate, inflation and risk diversification. The purposes of this study are four-fold: 1) to understand how millennials perceive technology-based financial learning differently based on two different learning platforms, 2) to find how different peripheral cues influence millennials' attitude and trust on financial learning platforms, 3) to recognize the relationships between millennials' perception and their acceptance of technology-based financial learning platforms, and 4) to suggest managerial implications for financial institutions by suggesting effective platforms to provide financial knowledge.

Karen Lee Hart, David M. Barber, Michele Mossay, Charles Del Risco, Ray Coughlin (Student), Christopher Grant (Student), Joseph Gottfried (Student)

School of Fine and Performing Arts, College of Liberal Arts

"*Gone*: An Original Theatrical Event Devised Through Collaboration and Experimentation"

Gone is an original theatrical piece premiering as part of the Kean Theatre Conservatory 2019-20 season, marking the culmination of a four-month exploration by the interdisciplinary team of Kean faculty and students. The group will explore the topics of grief, death, global warming, violence, and the loss of society's innocence along with the resulting collective denial of responsibility. The creative team of performers, designers, and directors will turn the typical script-based production process upside-down and create a production through the exploration of movement, language, unconventional locations and perspectives. The collective creative process and performance will be documented for further development.

Bok Jeong, Leonard Grayson, Kihwan Kim, Patrick McManimon, Deborah Mohammed-Spigner, Darlene Laplante (Student), Doreen Burgess (Student), Jenny Gallegos (Student), Justina Vicioso (Student), Victoria Kayingo (Student)

School of Criminal Justice and Public Administration, College of Business and Public Management

"Inventing Reentry Programs: Public, Nonprofit and Social Enterprise Collaboration"

To tackle the dilemma of the increased demand and lack of access to service, this study explores a collaborative form of response to the public policy problem of high re-incarceration. This study maps out local initiatives and re-entry programs demonstrating the collaborative partnership between public agencies, nonprofit organizations, social enterprises and corporations. Then, it conducts a survey and interviews with government officials, nonprofit managers and returning citizens. This study contributes to identifying local actors that contribute to resolving the high re-incarceration issue. It highlights the significance of collaborative partnership as an alternative and innovative solution for addressing public policy problems.

Thomas Koc Jr. Timothy Marshall, Jenna Tucker, Gabriella Fama (Student), Jinal Patel (Student)

School of Physical Therapy, Nathan Weiss Graduate College

"Management of a Patient with Postural Orthostatic Tachycardia Syndrome, A New Perspective for the Physical Therapist: A Case Report"

Physical therapy management of postural orthostatic tachycardia syndrome (POTS) symptoms is not currently well established. The purpose of this case report was to monitor and explore subjective and physiological responses to multimodal treatment interventions to manage symptoms, improve function, and decrease syncopal episodes in a patient diagnosed with POTS. The patient was a 25-year-old female with a primary diagnosis of POTS. SF-36 components improved with progression from patient-controlled rest intervals to therapist-controlled rest intervals over 30 physical therapy visits. This multimodal training program resulted in symptom reduction and improved quality of life likely due to improved parasympathetic tone.

Craig Konyk, Nicole Emerson (Student), Samantha Coppola (Student), Violeta Jaya (Student)

School of Public Architecture, Michael Graves College

"NO PARKING: New Commuting Ideas for the Raritan Valley Line"

This proposal is to design the necessary infrastructure (from the transit transports to the soothing interiors of the health and wellness facility) by developing the acres of now-not-necessary parking lots that surround each and every NJ Transit Station into locales of interactivity instead of only points of transit. Using the NJ Transit Raritan Valley Line as a test case, three stations will be adapted using these guiding principles of community enhancement and ease of one's daily commute to create new centers of civic engagement around mass transit.

J. Barry Mascari, Jane Webber, Kareem McKenzie (Ph.D. Student)

Department of Counselor Education, Nathan Weiss Graduate College

"A 3,000-Year-Old Disease Finally Has a Name and Etiology: Treating PTSD and Becoming Trauma Informed"

Historians documented the effects of combat and disaster events as early as 1300 BCE, but extreme suffering continued until recent brain research found the neurobiological basis for symptoms. Despite the existence of effective treatments for posttraumatic stress disorder (PTSD), they are not widely employed with military or civilian populations. This session chronicles the etiology of PTSD symptomology at pivotal points in history, the circuitous development of effective treatments, and reasons for the resistance to changes in treatment by the medical and psychological professions. What does treatment that addresses trauma symptoms originating in the autonomic nervous system look like, and where is training and treatment today?

Dongyan Mu, Andrew Diaz (Student), Danielle Junio (Student), Karolina Sawicka (Student)

School of Environmental and Sustainability Sciences, The Dorothy and George Hennings College of Science, Mathematics and Technology

"A Comparative Life Cycle Assessment of Bok Choy and Lettuce Produced in Hydroponics vs. Aquaponics in New Jersey"

The research used Life Cycle Assessment (LCA) as a tool to quantify resource use and the environmental and human health impacts of bok choy and lettuce produced in hydroponics and aquaponics in New Jersey. The study involved on-site data collection and software modeling for impact analysis. The scope for analysis covered all the impacts in facility establishment, vegetable production and their supply chains. The LCA results showed both vegetables grown in the hydroponic system had much higher impact than that grown in the aquaponic system, and the lower plant growing density of the hydroponic system caused the higher impacts. The research also identified the plastics used in building the greenhouse as a major factor that caused impacts.

Edward Olsen, Caroline Ratti (Student), Timothy Fabiano (Student), Ernest Calderi (Student), Jeffrey Montoya (Student)

School of Health and Human Performance, College of Education

"Developing Cultural Competence in Elementary Physical Education: An International Perspective"

Cultural competence is the ability to understand and appreciate other parts of the world, religions, cultures, and points of view (U.S. Department of Education, n.d.). Limited resources are available to develop students' cultural competence in elementary physical education settings. This presentation introduces a collaborative online international exchange of sports/games executed in elementary schools in the U.S. and Japan. Fourth- and fifth-grade students collaborated from both nations to introduce, share, and play traditional sports/games. Students reflected on their experiences through exit slips. The online exchange unit using sports/games may be a viable method in developing cultural competence in elementary physical education.

Mia Zamora, Patricia Dennis (Graduate Student), Medea Chillemi (Graduate Student)

School of English Studies, College of Liberal Arts

"*The Glass Room*: Looking Into Your Life Online"

What is personal data in an age where data is everything but personal? *The Glass Room* is an interactive exhibition on data and privacy that provides different ways of understanding how technologies are changing our lives. Websites, apps, social media and "smart" devices all thrive on our data. This open interactive installation invites the Kean Research Days community to explore how society is dealing with the growing dependency on data and technology, and the normalization of monitoring and surveillance. It aims to engage visitors to think more critically about their devices and interactions with technology. The exhibition features interactive apps, posters, displays and "takeaways" for visitors including a "Data Detox Kit."

STUDENT POSTER PRESENTATION ABSTRACTS

COLLEGE OF BUSINESS AND PUBLIC MANAGEMENT

ACCOUNTING AND FINANCE

Mohammed Abuhuzeima, Juan Romano, Michael Alfaro, Zydrique Williamson, Collin Wieczorick, Gyanick Hegde, Siddharth Singh
Faculty Advisor: Michael Suen

"Dot Com Bubble: The Rise of the Internet"

In this project, we will be focusing on the importance of the dot com bubble and how the internet is one of the most useful sources of information and biggest marketplaces in the world. The question is: How did the internet go from being used by the government to being used to by normal everyday people for information, online shopping and virtually everything else? The approach we will have to this question will first focus on the history of the internet and what it was first used for, and then we will go down a timeline on how it grew into the massive source of information it is today.

Fernando Centurion, Corey Burns, Jeff Castro, James Crowell, Anthony Carrasquilla
Faculty Advisor: Michael (Tin Shan) Suen

"Will Tesla Make It?"

As a leading sustainable energy company in the business of manufacturing automobiles of the future, Tesla has made a name for itself. The Palo Alto, California-based company is one we carefully selected to have a closer look at its financial wellness and future stability as ingenuity and new developments either makes or breaks the 2003 incorporated business.

Bowen Chen, Qingyang Xu, Fan Yang
Faculty Advisor: Qian Mao

"Starbucks' International Expansion and Why Starbucks Failed in Some Countries"

Our project focused on exploring the reasons why Starbucks can have such a success in America and Asia, but cannot do the same in some other countries. We think this project can find out the correct international market expansion strategy for some big companies. We took three countries where Starbucks failed as example: Australia, Italy, and Israel. We combined the internal condition of those countries (such as their GDP, inflation, income, cultural background) and the market strategy of Starbucks to find out the reason. We will present the different reasons why Starbucks failed in those countries, and report a conclusion of Starbucks' international expansion.

Ryan Cordeiro, Igor Faustino, Veeral Patel, Michelle Sialer, Keisah Roberts, Shamli Verma, Khusbu Patel
Faculty Advisor: Michael Suen

"An Election Year's Involvement on Fed Policy"

The group and I have agreed upon researching the effects of an election year on federal policy. We will be using various instruments to collect our data, such as public data, scholarly articles and historical data. We believe during times of an election, it will have a positive impact on the federal policy.

Sheraz Imtiaz, Matthew Vigil, Yoeric Valdez, Uche Odoemena, Daniel Alfonso
Faculty Advisor: Ipek Kocoglu

"The Secret Behind Core Values for Success"

At the center of every company are the core values that drive day-to-day activities. Core values aim to guide the actions and behaviors of employees and executives as the common thread that holds everyone together, uniting them with shared expectations and values. Core values also serve as cultural cornerstones. They are embedded in company strategy statements such as mission and vision, through which they are communicated to stakeholders. In this study, by doing a content analysis in mission and vision statements of the top 50 Fortune 500 firms, we identified the four common core values consistently highlighted and communicated. Our research shows that globalization, sustainability, ethics and diversity are the most commonly expressed values by the most successful Fortune 500 firm.

Zhixuan Jin, Juejie Chen
Faculty Advisor: Qian Mao

"Norwegian Sovereign Wealth Fund"

Norway has one of the world's largest funds — sovereign wealth funds. To know what makes it the world's best one, we will analyze several aspects from sources, composition, investments, returns and the relevant government policies of Norwegian sovereign wealth funds.

Elyssa Johnson, Katya Bustamante, Jarret Warner, Edvaldo Soares, Yuxin Lin
Faculty Advisor: Michael Suen

"Federal Policy Effects on the Dot Com Bubble and Global Financial Crisis"

The investigation will be performed with the aim to put into evidence the "Dot Com Bubble" theory and its effects on the financial market. To develop this research, we have opted to use the methodology of reviewing public records and literature. The expected conclusion is that the Federal Reserve did and tried several different things during the global financial crisis.

Jiaxin Li, Lanxin Wu
Faculty Advisor: Qian Mao

"Gender Diversity and Stock Market Return"

Diversity at workplaces has grown more and more compelling over the last decade, including but not limited to gender, race, ethnicity, age, religion, etc. An increasing number of evidence proves that diversity at the management level leads to improved company's financial performance, so we want to know the specific evidence in stock returns that shows the market has confidence in diversity. We investigate the Fortune 500 companies with female CEOs, choosing the typical ones and calculating the returns to have a brief look at the market's attitude of diversity. Finally, we find that companies with gender diversity perform better than companies without gender diversity.

Andrew Liranzo, Oludare Dada, Nisarg Patel, Shellsy Gutierrez-Palacios, David Santos, Nicholas Tekula
Faculty Advisor: Michael Suen

"Tesla's Cost of Business"

In our research project, we aim to find the cost of capital for the electric car company, Tesla. This empirical study will allow us to apply what we learned in the classroom toward a real-life application. The methods we would use to find Tesla's cost of capital are comprised of the Constant Growth Model method, the CAPM method, and the Weighted Average Cost of Capital Method. Ultimately, we found the cost of capital (WACC) for Tesla.

Veeral Patel
Faculty Advisor: Benito Sanchez

"Do You Shop at Walmart? You Should Also Buy It!"

In this research, I studied whether Walmart Co. is fairly valued or not. Walmart is a retail corporation listed on the New York Stock Exchange that employs 2.2 million workers. Using both time-series regression and fundamental determinants of growth rate, I forecasted the growth rate of Walmart. I then used the forecasted growth rate to estimate the value of the company using both free-cash-flow and relative valuation methods. While I valued Walmart at $140 per share, the company is selling for $120, which means that Walmart is undervalued. Moreover, I found that Walmart is a good buy because of its low-cost strategy, high total asset turnover ratio and excellent customer service.

Joseph Rocha, Bryan Chalecki, Shamali Verma, Rachel Monteiro, Lillian Vieto
Faculty Advisor: Kai Wang

"Under Armour: The Black Sheep of Sports Apparel"

Under Armour is one of the world's leaders in sports apparel manufacturing. Compared to its competitors, such as Nike (founded in 1964), Puma (founded in 1948) and Adidas (founded in 1924), Under Armour was founded in 1996 and according to Forbes is the fourth-most-valuable sports apparel brand in the world. But even with that reputation, Under Armour is mostly an afterthought because of the presence of industry leaders, such as Nike and Adidas. Under Armour right now is in a "slow period" where revenues have been increasing only slightly and shareholders question the company's future. My group is here to discuss how Under Armour continues to strive in this industry with their business strategies, marketing, and consistent growth.

Andres Rodriguez, Benjamin Sam, Giuseppe Sebazttiam, Sandy Sai, Geraldo Rivera
Faculty Advisor: Michael Suen

"Fed Response after 2008 Financial Crisis"

Following the financial crisis of 2008, the Federal Reserve (the Fed) undertook some stringent measures to avoid the occurrence of such an event in the future. One of the key responses that the Fed undertook was implementing monetary policy that would seek to stimulate the economy back to its former state and continue on an upward trajectory. Monetary policy is essentially a policy that is adopted by the authority of a nation that seeks to take control of either the interest that is payable on short-term loans or altering rate with the aim of influencing the inflation rate. Simply stated, it is the communications and activities of the central bank that seeks to regulate or manage the supply of money.

Walid Salas, Denis Llagami, Emily Costa, Isaac Whitmore, Chris Marte
Faculty Advisor: Michael Suen

"An In-Depth Analysis of the Great Depression: America at the Bottom"

Depression is a disease that drastically affects a person, mentally and physically. It is a disease that is not taken lightly, and neither should the Great Depression. After a period of unbelievable economic success in America, the plummet from the peak was just as impactful. As a team, we shall analyze the causes and effects of this time period. We will discuss the state of affairs prior to the crash, during the crash, and what this country did to make sure it does not happen again. We will briefly discuss the global effects of the Depression. Finally, we will compare it to other significant recessionary periods throughout the history of our country.

Payal Shah, Igor Faustino, Zhang Wei
Faculty Advisor: Qian Mao

"Ireland's Booming Economy"

Starting from 2014, Ireland has sought to be a competitive force in the global economy. A critical way to do this has been by strengthening the country's homegrown science and technological research. Ireland has created new national research centers to focus on biotech, pharmacological research, and information and communications hardware and software. This is a nearly 80 billion-euro program! Between 2014 and 2020 Ireland planned to fund research initiatives designed to keep Europe competitive; many of the projects have already been funded!

Lei Song, Yuanman Wang
Faculty Advisor: Qian Mao

"Impact of Innovation Investment on Goodwill of Chinese Companies"

This research aims to study the impact of the innovation investment on goodwill of Chinese companies. By analyzing different Chinese companies from various industries and connecting hypothesis with reality, this research will demonstrate the direct relationship between the influence innovation brings and goodwill, and we mainly focus on whether the innovation investment of Chinese companies is proportional to their goodwill. Since this research question is related to mathematical relation, plenty of statistics data from 2016-2018 from dozens of companies will be analyzed according to various methodologies, including correlation prediction and analysis. The main conclusion will be more innovation investment can make the goodwill improve.

Wenrou Xie, Chuna Zhang
Faculty Advisor: Qian Mao

"A Review on Bitcoin Market: Trading, Volatility and Impact"

Bitcoin has gained great attention among the public. While it is still under debate whether bitcoin is going to rival or even replace fiat currency, it has already made a significant difference in the financial world. This research is intended to review the Bitcoin market in general, including bitcoin trading activities, price volatility and its impact. First, we will introduce several types of bitcoin trading methodologies with a simple discussion of the benefits and risks. Next, we will explore some basic reasons behind bitcoin volatility. Then, we will give a brief analysis on bitcoin's impact on the stock market, forex market, and derivative market, etc. Finally, we will come to the conclusion.

Renkang Yu
Faculty Advisor: Qian Mao

"The Impact of a Change in the Ruling Party on Green Energy Financial Products"

This is a research that is attributed to finding the impact of changing the politics characteristics on green energy financial market. Developing green energy has been an important trend in the world, especially in America. However, it might be influenced by many elements of the financial market. There is no doubt that politics would be an important part that would impact the financial market. This research would try to figure out the influences by using comparison and regression methods in green energy stocks, traditional energy stocks, and SPY&500. It explores that the market would make a reaction to the stock price preiviously, so the change of the ruling party did not make a significant impact on green energy products.

Lin Yuxin, Shen Shuyi
Faculty Advisor: Qian Mao

"The Success and Failure of American Companies Investing in China"

As the country with the second-largest economy, China has attracted a lot of foreign investment and the Chinese market is not yet fully saturated; there are still many opportunities and benefits. We review some U.S. companies that have invested in China in recent years, finding out their development situation and the direction of this development. Many U.S. companies have surpassed local companies to become leaders in the industry. However, there are also many enterprises in this fierce competition that were eliminated. We tried to figure out the reasons behind the successes and failures and what made them competitive in the Chinese market.

Jiayi Zhou, Kangyue Wang
Faculty Advisor: Qian Wang

"An Analysis of the Success and Failure of American Enterprises in China from 2008 to 2020"

Our research investigates the success and failure of a sample of American enterprises in China in the past decade. We selected three successful enterprises, as well as three failed ventures. We analyzed the underlying causes of these two very different groups in the following three aspects. Firstly, national policy in tariff and exchange rate influence development of U.S companies. Secondly, social conditions vary from country to country. We consider the social impact among the companies. People's perspective and lifestyle are diverse in different countries. Lastly, with the technology booms in China, U.S. companies in China will obviously be affected by the development of tech, such as E-commercial and Logistics-development.

CRIMINAL JUSTICE AND PUBLIC ADMINISTRATION

Hamza Abuhassouna
Faculty Advisor: Bok G. Jeong

"The Harmful Effects of Tobacco on Young Adults in the U.S."

This study examines the risks of tobacco use among young adults in the U.S. as well as the process of their getting addicted to nicotine. The use of tobacco products is extremely prevalent worldwide, and young adults are most targeted by tobacco companies. This research will focus on nicotine addiction in the U.S. among young adults (18–24 years of age) and teens (12–17 years of age). The data on the tobacco use among youths from the U.S. Department of Health and Human Services will be used in this study. This study will focus on the scientifically documented negative health effects of tobacco products, in terms of short-term effects, and the more dire physical consequences of long-term smoking.

Research supported by: U.S. Department of Education, First in the World, Research Active Mentor (RAM) program, P116F150028

Ursula Ascencio

Faculty Advisor: Bok G. Jeong

"The Effects of Social Services on Employment in New Jersey"

This study compares the effects of social services on the employment of the residents in Somerset County, NJ. People receiving welfare may need more help than others in finding work. If recipients of social services received assistance in finding employment, would it increase the rate of citizens suspending their aid? It is possible to consider coupling services with mandatory job training to help provide resources that may lead to citizens finding work faster. This study will use unemployment databases and compare them over the years. This study will also use data on job training programs in New Jersey. This study may contribute to finding more information on the reasons why the cycle of welfare exists in some communities.

Alexander Asinobi

Faculty Advisor: Bok G. Jeong

"Examining Environmental Protection Agency Policy Changes Under the Trump Administration"

This study explores the policy changes of the Environmental Protection Agency (EPA) under the Trump Administration. The Trump Administration finalized an initiative to remove environmental protections of groundwater and wetlands along with protections of rivers and streams. This study aims to inform the public of what is currently taking place and how it affects everyone's lives. This study will be based on scientific evidence and focus on examining the changes made to the 1972 Clean Water Act.

Mathias Banner, Daisy Linares, Giselle Liariano, Sabiha Parveen

Faculty Advisor: Bok G. Jeong

"Special Improvement District in a College Town"

Since the Fall 2018 semester, Kean MPA students, as part of their Capstone program, have researched (through survey methods) how to better integrate collaboration between Kean University and the Union Special Improvement District (a 501(c)3 nonprofit focused on revitalizing Union's downtown district). This semester, Capstone students analyzed the previous data to highlight demographics, barriers, and opportunities. Research questions concentrate on finding the mutual needs of those surveyed, as well as the opportunities that can be explored to garner more interest. Conclusions look at what is viable for future collaboration and for future research possibilities for Kean MPA students.

Darshan Bhatt, Kadeisha McClean, Iheanyichi Emenonye, Luis Ulerio

Faculty Advisor: Bok G. Jeong

"The Human Papillomavirus and Union County: Evidence-Based Analysis and HPV Toolkits"

Despite the fact that human papillomavirus (HPV) is the most common sexually transmitted infection, its immunization rates continue to languish in Union County, New Jersey. The Union County Health Department has conducted awareness campaigns and engaged parent groups in the community in an effort to move the needle in adolescent immunization, but it has not seen progress. To increase resources for the community, this study examines vaccination rates in counties of New Jersey, the state of New Jersey, and the United States. This study asks what the best practices are in education, immunization, and awareness of the treatment for HPV. Data derived from the study will contribute to providing a clearer picture of the gaps in immunization and providing a framework for HPV.

Lassen Christov

Faculty Advisor: James Drylie

"Social Class Crime and Punishment"

The disparity between social classes as it relates to various aspects of the criminal justice system in the United States has long shown that the system is inherently and systematically biased towards persons living in lower socioeconomic levels. This research will assess this imbalance through an analysis of secondary data from the Bureau of Justice Statistics (BJS) and the National Crime Victimization Survey (NCVS) that records annual income and the total number of criminal offenses within the annual income bracket. Data from both data sets ranging from 1990-2010 will be assessed.

Michael P. Crowley Jr.

Faculty Advisor: Bok G. Jeong

"Examining Trends in Opioid Addiction Demographics in New Jersey"

This study examines the trends in the demographics related to opioid addiction in New Jersey. This study will use data from the New Jersey Department of Health, United States Census, and other public data sets on health and human resources rehab. This study will analyze historical trends while combining the data sets to discover the total percentage of rehab entries and average income levels of municipalities. This study will contribute to helping predict the trends in addiction rehab cost, thus providing a recommendation for local government budget planning and resource allocation.

Amanda Galazzo, Chidi Ukaegbu, Bre'yanie Pearson, Sadio Patterson-Tate, Adelano Adebo, Kusi Lescano

Faculty Advisor: Bok G. Jeong

"Engaging Community Through Art Initiative: Renovating the Union Township Movie Theater"

This research explores how the renovation of the Union Township movie theater can increase community engagement within Union Township. This research aims to understand how the Union movie theater is currently operating and how it can be transformed to serve the needs of the community. These tests will be conducted through a survey, interviews, and website searches. This study will also conduct a qualitative research, including participation and observation of movie showings to understand the space and the community that attends the theater. We expect to create an art space that will allow individuals to come together as a community.

Tanya Gauthier

Faculty Advisor: Bok G. Jeong

"Traumatic Brain Injury Recovery in Soldiers"

This study examines when American soldiers with traumatic brain injury are more likely to recover at a higher rate. This study will compare the recovery rate between military medical care and home care after being discharged. This study will use statistics from the Department of Veterans Affairs to assess their recovery process. This study will contribute to providing light to the traumatic brain injury situation and resources available for home care. This study aims to form an educated suggestion on the best and most effective way for their recovery.

Wonjun Han

Faculty Advisor: Bok G. Jeong

"Effects of Mandatory Sex Education on Sexually Transmitted Infections"

Do mandatory sex education policies reduce STI rates? Sex education, in theory, should reduce STI rates by educating people on how to protect themselves. Thus, states that have a mandatory policy to teach sex education should have lower rates of STI compared to states that do not have a mandatory policy. This study will compare states that have and don't have a mandatory sex education policy with similar population sizes by looking at Census Bureau data. CDC data on total STI rates per 100,000 population in 2018 will also be compared. This study will contribute to assessing the impact of mandatory sex education on reducing STI rates in the U.S.

Maudeline Jean-Pierre, Darlene Laplante, Avni Shah, Erin Burkert, Samuel Marfo

Faculty Advisor: Bok G. Jeong

"Stakeholder Needs Assessment for Urgent Care: A Case of the Shoppes at Vermella Union"

Urgent care centers are the valid bridge between a primary care physician and an emergency department. As urgent care centers continue to grow more reputable, this research examines the need for an urgent care center at the newly developed Shoppes at Vermella Union by the surrounding stakeholders. This research utilizes a mixed method of quantitative and qualitative analysis. This study conducts descriptive analysis and cross-sectional analysis, based on a needs assessment survey that was distributed to surrounding stakeholders from Oct. 29–Nov. 17, 2019. This study found that the Union County stakeholders have substantial needs for health-service representation at the Shoppes at Vermella Union.

Victoria G. Kayingo

Faculty Advisor: Bok G. Jeong

"The Impact of the Universal Primary Education Program in Uganda"

The Universal Primary Education Program in Uganda seeks to increase literacy levels in the country; extending free education at the elementary level gives an opportunity to all children to access education. This paper examines the level of impact of the Universal Primary Education Program in Uganda. Is this program having the same impact on rural as well as urban schools in Uganda? This paper will clarify on the enrollment rates for girls and boys in primary schools since 1997. Secondary data on gross enrollment rate by age groups and gender will be used. This study will contribute to assessing the impact of this nationwide program on improving literacy levels in the country.

Shelby Loza

Faculty Advisor: James Drylie

"Posttraumatic Growth in Police Officers"

During the lifetime of a law enforcement officer's career, they will be exposed to a wide range of trauma. The frequency that officers are exposed to threats and crimes against humanity increases the complexity of police trauma. The purpose of this study is to provide insight into factors that contribute to a police officer experiencing posttraumatic growth (PTG) as opposed to posttraumatic stress disorder (PTSD). It examines the results of five separate studies concentrating on the unique link between police trauma, PTG, and PTSD. The synthesis of literature suggests that gratitude, social support, and satisfaction with life play a significant role in the reason police officers develop PTG, as opposed to PTSD. This study focuses explicitly on these factors as they relate to law enforcement officers. Data will be presented in poster format and broken down by category, specifically gratitude, social support, and satisfaction with life. Limitations, as well as future research, will also be presented.

Valeria Marin-Rangel

Faculty Advisor: Jung Ah Yun

"Evaluative Study of Nonprofit Organizations Serving the LGBTQI Incarcerated Population"

LGBTQI individuals face a unique set of challenges that are not addressed by organizations that serve all the incarcerated population, including discrimination, higher risk of incarceration, and vulnerability due to increased abuse rates by other inmates and staff. Organizations whose mission is to assist these individuals address aspects of their experience in different ways by providing access to books, education, advocacy, legal representation, and advocating for health care. This study will evaluate the organizations and programs specifically for LGBTQI incarcerated individuals, including location, outreach, individuals served and impact, in order to highlight successful programs and identify any gaps that are yet to be addressed.

Kadiesha McClean

Faculty Advisor: Deborah Mohammed-Spigner

"Addressing Pandemic Infectious Diseases: A Public Policy Proposal"

Infectious diseases have the ability to transform a local wave of illness to a global precedent. Infectious diseases are caused by microorganisms like bacteria and fungi spreading from one human to another through direct and indirect methods (WHO). Once the contagious disease evolves from local infection within a county to one or more continents, it is classified as a pandemic (Chawla et al., 2009). To address infectious diseases, this policy paper recommends and will focus on the following: governance decisions utilizing collaborative councils, isolation and distancing techniques, restraints on travel, distributions of vaccines and prevention methods, and financial pandemic preparations.

Evelyn Mensah

Faculty Advisor: Bok G. Jeong

"The Correlation Between Health Disparities and Minorities in the U.S."

This study focuses on health disparity in terms of the causes of differences in the quality of health and health care across different populations. Factors such as lack of work, access to care, and transportation, are all examples of what leads to differences in quality of care. This study explores the negative correlation between health disparities and minorities in the U.S. Do health disparities have a negative impact on quality of care for minorities? Without access to healthcare, it becomes really easy for minorities to face issues such as health issues and stress for an individual. This study uses data on health conditions by racial and ethnic groups. This study will contribute to assessing the disparity that affects the quality of health.

Paige O'Brien

Faculty Advisor: Jung Ah Yun

"Maternity Leave and Childcare Benefits in the Workplace"

As the employment of women has increased and the work-life balance becomes a critical issue, the policies and supports on maternity leaves become important, including workplace-provided childcare. This study examines current policies in the United States at the federal level and discusses the lack of policies existing in this country by comparing those of foreign countries. Although employers may not see the benefits from these policies as much as the employees themselves, these benefits will improve employees' morale and motivation, which will significantly benefit the company and its employees. The research will propose potential policy suggestions that need to be considered to provide families with better benefits.

Akanmu Omosalewa

Faculty Advisor: Bok G. Jeong

"Relationship of Financial Performance and Accountability of Human Services Nonprofits in New Jersey"

This study examines the relationship between financial performance and accountability of human service nonprofits in New Jersey. It performs descriptive analyses of major financial performance metrics including fundraising efficiency, program expenses growth, and liabilities to assets. The accountability index, comprised of board independence, audited financials, board meeting documentation, and conflict of interest policy, will be assessed. A correlation analysis between financial performance and accountability/ transparency will be conducted by utilizing human service nonprofits' data provided by Charity Navigator. It will contribute to assessing how nonprofits' financial management is associated with their accountability practices.

Research supported by: Research Recruits program, Kean University

Odunayo Otele

Faculty Advisor: Bok G. Jeong

"Gender Disparity in the Prevalence of Depression among American Adults"

Background: This study examines whether gender disparity exists in the prevalence of severe depression among American adults aged 18-65 years old. Socio demographic factors including gender have consistently been identified as important factors in explaining the variability in depression prevalence rates. This study will contribute to assessing the significance and extent of gender factor in creating a disparity in one of the most common mental disorders in the U.S. Methods: The NHANES mental health depression screener is based on a nine-item depression screening instrument, which will be scored to a severity of Mild, Moderate, or Severe using pre defined cut points. *Expected findings: Gender is an important predictor of severe depression.*

Brianna Paredes

Faculty Advisor: Connie Hassett-Walker

"Online Hate Speech and the First Amendment"

According to the First Amendment to the U.S. Constitution, "Congress shall make no law… abridging the freedom of speech, or of the press." However, Supreme Court cases have established some limits to free speech, particularly if the speech poses a threat to public safety. While some speech may be ugly, such as support for white supremacy, it would likely be considered protected speech under the First Amendment. Online threats to a specific person or group of individuals would likely not be protected under the First Amendment, and could result in the person making the threat getting arrested. The goal of this study was to assess the nature of some online hate speech, and determine whether it should be protected under the First Amendment.

Research supported by: Research Recruits program, Kean University

Bre'yanie Pearson

Faculty Advisor: Bok G. Jeong

"Assessing Challenges Facing School Districts in Newark, New Jersey"

This research explores how challenges faced within urban areas negatively impact the sustainability, performance, and success of high school urban education within Newark, New Jersey. This research aims to address the top challenges faced within Newark, and to create solutions to improve and sustain the performance of students for the better all across Newark school districts. These tests will be conducted through Census data, the New Jersey School Performance Reports, Essex County Education Data and community surveys. This study may contribute to collecting information that can be given to leaders and teachers or possibly training resources to increase the performance rates of high school students.

Titlola Price, Sawab Shabazz, Iesha Torres, Deborah Rivera, Patricia Oviatt, Cherisse Deb

Faculty Advisor: Bok G. Jeong

"Examining the Incorporation of Diversity Values Within Nonprofit Organizations in New Jersey"

This research asks how nonprofit organizations in New Jersey incorporate diversity components into their management. To answer this question, this study conducts interviews and surveys with the leadership from various human service organizations in New Jersey. Diversity encompasses the ways that people are unique, but most importantly involves the conscious understanding of individual similarities and differences through knowledge. This study may provide a toolbox that can be used by nonprofit organizations in New Jersey and will contribute to assessing New Jersey nonprofits' incorporation of diversity values in their management.

Milena Angela Ramos, Greta Latvyte, Shanice Washington, Trever Carpenter, Celeste Tugman

Faculty Advisor: Bok G. Jeong

"Significance of Adverse Childhood Experiences on Students in New Jersey"

We aim to create a mandatory online program that will train and inform our educators in New Jersey about the significance of adverse childhood experiences (ACEs). Through our research we want to examine what type of policy-based online training can be implemented that will have a positive impact on students suffering from adverse childhood experiences in New Jersey. A correlational analysis of abuse (e.g., physical, emotional, sexual, neglect) including divorce and domestic violence and its relationship to academic performance and behavior of students' ages 5-18 will be conducted. It is recommended that the new online training program be open to clinicians, educators, and guardians to further create a successful school culture.

Janice L. Sampson

Faculty Advisor: Thomas Lateano

"The Cradle Never Rocks: Neonaticide — Purposeful Killing of a Newborn"

Neonaticide is defined as the killing of a newborn child within the first 24 hours postpartum. A clear distinction exists between women who kill young children compared to women who kill newborns. This difference highlights the need to examine the unique characteristics of neonaticide from a perspective apart from other forms of parental killings, such as infanticide and filicide. This review of current law and research attempts to identify the characteristics specific to neonaticide to heighten public awareness and to identify opportunities for education, early intervention, and meaningful policy change. The information provided in this poster presentation will be of interest to educators, students, and members of the general public.

Tavon Spearman

Faculty Advisor: Jung Ah Yun

"Women's Representation in New Jersey County Governments"

This is an exploratory study focusing on women's representation at the local government level in New Jersey's county government officers and freeholder positions. Main purposes of this study are to exemplify women's representation and explore potential determinants of women's representation in county governments in the state of New Jersey. This study uses financial disclosure statements containing a comprehensive list of high-level officers, elected or appointed, in local governments and special entities including specialized authorities, boards, and commissions.This research may contribute to the literature on women's representation in local governments by providing an empirical case with descriptive statistics.

Tavon Spearman, Pankil Lal, Adriana Perez, Sasmoya Hastings, Odunayo Otele, Brian Volpe

Faculty Advisor: Bok G. Jeong

"Developing a Handbook in Partnership with the Union County Health Department for a Health Emergency Outbreak"

This research explores how the Union County Health Department can prepare for a health emergency outbreak such as the Coronavirus. The aim of this research is to develop a handbook in partnership with the Union County Health Department. This will be a qualitative study, applying data from the Centers for Disease Control, the Union County Health Department, and the World Health Organization websites. The survey method will be applied in order to collect data from Kean University students. This research will contribute to developing a handbook that can be used by the Union County Health Department, public institutes, and private agencies in the case of a health emergency outbreak.

Jazmine Torres

Faculty Advisors: Craig Donovan, Bok G. Jeong

"Comparing the Recruitment, Application and Acceptance Practices of Sino-U.S. Transnational University"

The demand for American higher education is a global phenomenon. In China, President Nixon's historic meeting with Chairman Mao Zedong in 1972 began a process of positive evolutions in Sino-U.S. relations. Productive collaborative exchanges have included sports, culture, science and technology, women's issues, health, and education. Over the past two decades, Chinese students have shown a dramatic increase in the demand for American higher education, with more than 50,000 Chinese students currently studying in the U.S. alone. This study examines the establishment and operations of Transnational Universities — in this case, American Universities operating campuses in China for Chinese students, as an example of an innovative approach to meeting need.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Luis Ulerio

Faculty Advisor: Bok G. Jeong

"The Effects of Single-Room-Occupancy Housing on Closing the Housing Gap for Low-Income Individuals"

This research examines whether single-room-occupancy housing helps close the housing gap for low-income individuals in Camden. Single-room occupancy housing was an integral part of the U.S. housing stock in the second half of the 20th century until a significant amount were razed by cities because of the stigma surrounding the people that called them home. This study will use the data from the Census Bureau and the 2013 - 2017 American Community Survey. This paper will analyze the benefits and challenges of introducing this housing model in order to help meet the demand for affordable housing in Camden. This study will contribute to assessing if this occupancy housing model is viable and effective in reducing the gap for low-income individuals.

Daria VanderGoot

Faculty Advisor: Alexander Sepulveda

"Plea Bargaining in the State of New Jersey"

This research study will review plea bargaining in the State of New Jersey. The following research will discuss how plea bargaining can have different effects on a case. It will also explore the pros and cons to someone accepting a plea. In the State of New Jersey, a plea bargain is an arrangement between the defense and the prosecutor for the defendant to agree to a guilty plea. In conclusion, plea bargaining can play different roles in cases in New Jersey.

Justina Vicioso

Faculty Advisor: Patrick McManimon

"Are Reentry Programs in the State of New Jersey Improving?"

As more releases are taking place, offenders are being released to society without any guidance. Therefore, it is important to have reentry programs that are effective to be able to provide the necessities to offenders. Going to prison for one month to max years can do damage on a person physically, mentally, and emotionally. These programs were created to help individuals reenter their communities without returning to prison. Not only do these programs have the potential to reduce recidivism, but also have an impact on daily functioning for ex-offenders. After conducting secondary research, I found New Jersey has placed a larger focus on post-release care and has effectively improved.

Megan Winnicker, Jessie Coronel

Faculty Advisor: Bok G. Jeong

"The Effects of Gender and Education Level on Nonprofits' Volunteer Recruitment"

This study examines the relationship between gender and volunteering across multiple races to determine which sex seeks more community involvement and to understand the differences in volunteer rates that exist among individuals of varying genders and education levels. Prior research asserts that gender and education level influence volunteering experiences. Similar to the workforce, the volunteer sector is highly segregated by gender. And, though volunteer behaviors are thought to vary greatly across different racial and ethnic groups, few studies focus specifically on volunteerism in minorities by gender and education level. This study will contribute to enhancing nonprofit organizations' volunteer recruitment efforts.

Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

GLOBAL BUSINESS, MANAGEMENT AND MARKETING

Justin Roland Antonio, Janell Laws, Victoria Vitale

Faculty Advisors: Byeonghwa Park, Kihwam Kim

"Finding the Betrayer Judas: Developing the Scale of a Follower's True Intention"

Leadership theory is a set of studies researching a follower's commitment and retention to their leader. There are four common motives or sub-theories to follow a leader: social identity, social exchange, economic exchange, and legitimacy. It consists of a physical and psychological connection between the leader and follower. The quality of their relationship will change according to the actions and behaviors each party exhibits. Leadership theory is applicable to potential leader-follower relationships and future research problems, and holds its own set of limitations. The current study is designed to analyze the psychological behavior behind why and how followers dedicate to leaders.

Marta Antunes, Angela DeGiglio, Nadia Harmon, Callyn C. Stockel-Acosta, Kimberly Borges, Diamond DeBarros

Faculty Advisor: Ipek Kocoglu

"Comparing Female and Male Executives in Fortune 500"

The purpose of this research is to analyze the relationships between gender diversity and if having more female executives in the top management team impacts the firm's growth. In past research people examined various aspects and found that female representation in top management improves firm performance. In our research we are trying to study how male and female leadership styles differ in the workplace, as well as the wages earned between the two in executive positions. In order to reach our results, we will analyze company data known as the Fortune 100/500 and annual reports. We will also use additional information from the Kean Library and Google Scholar. We project that female executives have a higher impact in the firm's growth.

Erin Araneo, Kanyinsola Aragbada, Vanessa Watson

Faculty Advisor: Ipek Kocoglu

"Connecting Hair and Makeup Artists with Clients: Easy Glam & Hair"

Although cosmetology is a popular field, many local hairstylists and makeup artists are not able to find a job in the field in which they have expertise. Talented artists who are unemployed have challenges in finding customers and therefore are unable to showcase their talents. In this project we design a mobile application that connects the hairstylists and makeup artists with customers by booking a chair in one of our locations to provide their services. Our app "Easy Glam & Hair" corresponds to several locations across the United States. The app works by hairstylists connecting to the app with a certain code. Each code pertains to a specific hairstylist/makeup artist. Once they have booked a chair, a client can then download the app and book an appointment through the specific code that relates to the hairstylist/makeup artist. This new platform we believe will transform the beauty industry by making it more accessible.

Jerry Bakman, Ada Chan, Daniel Vida, Kalah Isaac

Faculty Advisor: Thomas Abraham

"A Case Study of Kering and its Sustainable Practices"

Kering is a world-class luxury group located in Paris, France. Kering's three pillars of sustainability consist of caring for the environment, collaborating with stakeholders, and creating innovative alternatives by using an open source approach. Our research hypothesis, based on a literature review, is that Kering's mission for sustainability has improved their business performance and innovation. Our team will use the case study research method to collect and analyze data on how Kering carries out their sustainability practices and on their performance, to test our hypothesis. The data will be primarily collected from secondary sources such as company sustainability reports, annual reports, and media reports. The data will be analyzed using sustainability concepts, and our findings will be presented.

Alexander Batchelor, Jake Byford, Michael Kingsbury, Davin Moskal, Anisha Palermo

Faculty Advisor: Janine Black

"Electric Vehicle Accessibility for Underserved Communities"

Our project is about the adoption of electric vehicles (EV). Over the past several years, owning an EV was a fashion statement only the economically privileged could enjoy. Today, most EVs are still unaffordable for underprivileged communities. We'll discuss how we believe this new market of potential EV drivers can be penetrated. According to the Federal Reserve, the average disposable income in the U.S. in December was under $46,000. If we can transition this demographic from gas vehicles to electric, the benefit to Earth's climate would be astronomical. A not-for-profit (NFP) organization can provide monetary assistance on EVs for those who can't afford one. While NFPs haven't used this as their mission, they have been successful at helping other causes.

Marian Betancourt, Sandibel Betancourt, Ana Maria Portilla, Analis Nunez

Faculty Advisor: Valerie Vaccaro

"An Analysis of Celebrity Beauty Companies' Marketing Communications Strategies."

"Now that so many celebrities make themselves available on social media, fans … can … buy into their look" (Vox.com, 2019). Celebrities like Kylie Jenner, Rihanna, Millie Bobby Brown, and Lady Gaga have their own online beauty companies that use successful social media marketing. Our team will review industry research from secondary sources and analyze celebrity beauty brands' marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, and other areas). Our goal is to generate a new marketing communications plan for Thrive Causemetics based on industry trends and celebrity beauty brand strategies. Thrive Causemetics partners with nonprofit organizations that support causes that help women, animals, and others in the community to thrive.

Joel Boakye, Bhargav Patel, Ulysses Green, Melvis Mwafise

Faculty Advisor: Byeonghwa Park

"Achieving and Maintaining an Environmentally Sustainable Supply Chain in the Textile Industry."

Being environmentally friendly in the textile industry is very arduous, but companies that decide to go that way benefit from it, in the sense of incorporating broader principles of sustainability in their everyday business decisions. Myriad smart leaders and CEOs in today's society have realized that sustainability is good for the planet and is essential to long-term prosperity for business. With that being said, this paper will discuss how companies in the textile industry strive to attain sustainability by recognizing these three key factors: the enablers that push companies to adopt "green" practices, the different practices that can be used to improve environmental sustainability, and the environmental Key Performance Indicators measured.

Marlena Browne, Xavier Tay, Samuel J. Stundis, Kamsi I. Udodi, Desean A. Carter
Faculty Advisor: Ipek Kocoglu

"The Diversity Transformation in Fortune 500 Firms: Do They See Race and Gender or Only See Money?"

Diversity rewards the firm. Research shows that firms that outperform their competitors encourage mobilizing occupational minorities — women and people of color — to the top leadership positions. It is also evident that throughout their organizational life cycle, firms are increasingly becoming diverse in terms of gender and racial/ethnic backgrounds of their top managers, which in turn affects the success of firms. Taking a historic approach in this study, we examine the transformation of gender and racial/ethnic diversity in Fortune 500 firms over the last 20 years (1999-2019). We aim to show the increasing diversity trends in exceptionally successful firms. This study contributes to the field by highlighting the direct link between firms' diversity-orientation and their performance. We conclude that the top 10 Fortune 500 companies are in their current positions partially due to their increasing trend in hiring and promoting minorities to leadership positions.

Veronica Buzzurro, Nadezhda Sherman, Cristian Gamboa, Jesse Awansi
Faculty Advisor: Byeonghwa Park

"Analysis of Blockchain Technology Applied in Sourcing and Procurement Industry"

Blockchain is a platform mostly known in cryptocurrency; a blockchain is distributed on a peer-to-peer basis as a digital ledger, which allows transactions to be completed with no centralized authorizing agency. Blockchain for procurement: how will it create transparency and automate contracts? Research goals: The main goal of the research is to create a breakdown analysis for using blockchain technology for an organization within procurement (and supply chain system). The analysis will help the organizations determine if there is a cost benefit from implementing blockchain into the procurement process.

Priscilla Calderon, Fatema Aziz, Brandon Miles, Veronica Cepeda, Cynthia Colon, Nyasia Dias
Faculty Advisor: Ipek Kocoglu

"The Characteristics of a Successful Leader: Comparing Across the Fortune 500 Firms"

Leadership is the most critical determinant of firm success. Past research focuses on reasons as to why leadership matters to an organization. While the focus was on why leadership is important, few studies examined what the common characteristics are that leaders share as the pivotal agents of exceptionally successful firms. In this study we investigate the common leadership characteristics of the top 10 and last 10 Fortune 500 firms by comparing and contrasting their CEOs' traits. We will show that while the latter are missing a transactional leader, the former have CEOs who have a combination of traits that make them good leaders. Our analysis will focus on distinguishing between what makes leaders in the highest and lowest grossing Fortune 500 firms.

Cassandra J. Campbell, Vanessa Cajilema, Stephanie Motachwa, Christopher Tito, Jose Jaquez
Faculty Advisors: Kihwan Kim, Byeonghwa Park

"Emotional Intelligence and Leadership Emergence: Mediating Role of Self-efficacy and Trust"

Leadership emergence refers to the phenomenon in which an individual voluntarily takes a leadership role when there is no designated leader in the group. The current study attempts to explore the trait of the emergent leader and the process of leadership emergence. The study found that an individual with high emotional intelligence is more likely to emerge as a leader by showing the confidence in self and trust in the group and taking an initiative of group tasks.

Leslie Canales, Nicole Martinez, Leonardo Delgado, Jada Miller, Angella Zavaleta
Faculty Advisor: Valerie Vaccaro

"Marketing Communications Strategies for Cosmetics Companies with Women's Social Causes"

According to *Cosmetics Business*, it is now imperative that beauty brands positively address social responsibility to support causes related to consumers and society. We will research industry trends using secondary data. Our team will also conduct an analysis of cosmetic companies with social causes related to women's rights, women's health, and other global women's issues. We will review firms' marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, etc.). Our goal is to create a new marketing communications plan for Thrive Causemetics based upon the research. Thrive Causemetics has donated more than $30 million worth of products to over 50 nonprofit organizations that support women in the workplace, women veterans, women cancer survivors, domestic abuse survivors, animals and help communities around the world.

Brianna Canela, Antonio Bravo, Lucas Lopez, Jason P Higley, Stephen Solano
Faculty Advisor: Janine Black

"Electric Bikes"

The emergence of electric bikes in cities is presenting a new, impactful alternative to traditional travel methods. This new alternative to inner-city travel is providing an extra option to residents and commuters. It can serve to reduce congestion on the roads, cut carbon emissions, and make shorter inner-city commutes faster. Building stations across a city would create jobs that improve the local economy and lend help to those citizens who can't afford traditional types of transportation.

Sara Cano, Silver J Gonzales, Zhihong Chen, Waleska McLafferty, Xiaoming Li
Faculty Advisor: Thomas Abraham

"A Case Study of Natura and its Sustainability Strategy"

Natura is a personal care cosmetics company. Natura's sustainability strategy evaluates a firm's relationship with the environment, employees, customers and community. Our research hypothesis is that the implementation of Natura's sustainability strategy in their products and services brings a substantial improvement in their business performance and innovation. The team will use the case study research method to collect and analyze data on how Natura carries out their sustainability practices. The data will be mainly obtained from the company's sustainability report, annual report, and other media resources. The data will be analyzed by using the Global Reporting Initiative guidelines and other business strategies, and the findings will be presented.

Christia Carter, Sara Dowzycki, Brandy Mills, Mirana Camili, George Capria
Faculty Advisor: Ipek Kocoglu

"Employee-Focus is Critical for Best Companies to Work For"

This research analyzes the common cultural characteristics of the *Fortune*'s 100 Best Companies to Work for and the common characteristics in these firms that attract the best workforce. We compared the work culture, common traits, and the first 50 out of the 100 companies on the Fortune's 100 website. Our results showed that most successful businesses take care of their employees first; the reason why is because when employees enjoy going to work, they will create great service and generate a positive attitude during the shift. A common trait companies share is that they have an established and significant purpose. This study will emphasize how companies' cultural characteristics attract the best workforce.

Imani Chambers, Jeffrey Siceron, Gifty Amoanimaa, Simpson Therlonge, Alexis Balbuena
Faculty Advisor: Ipek Kocoglu

"The Differential Effects of Sector and Industry on Firm Growth"

The terms "industry" and "sector" are often used interchangeably to describe a group of companies that operate in the same segment of the economy. The term sector often represents a larger part of the economy, while industry encompasses firms that entail commonalities such as operations, the same target market or competitive environment. Thus, due to an increased comparability within an industry, an investor, when deciding on an investment opportunity, is more likely to compare between the different firms within the same industry. Given that the growth of a company depends on the level of investment opportunity it receives from investors, we argue that the industry will be more critical in the growth of the firms. Driven by this difference between industry and sector, in this study we investigate the sectoral and industry composition of the Fastest Growing Fortune 100 firms. We show that firm growth is closely correlated with the industry of the firm due to its role in garnering investment opportunities.

Jennifer Coello, Jorge Morales, Alejandra Damacela, Steven Pelaez, Sharon Pesantes
Faculty Advisor: Valerie Vaccaro

"Marketing Communications Strategies for Cosmetics Firms Focused on Health and Sustainability"

According to *Cosmetics Business*, it is essential for today's beauty brands to positively address consumer self-expression and social responsibility — supporting causes related to people and the planet. We will conduct secondary research on these industry trends. Our analysis will focus on beauty companies with social causes related to consumer health and environmental sustainability. We will analyze these firms' marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, etc.). Based on findings, we will develop a new marketing communications plan for Thrive Causemetics, which has the social mission that every "purchase impacts the lives of women, animals and communities around the world".

Bianca Cornejo, Emily Morris, Brianna Conroy, Stephen Elliot, Adam Heise
Faculty Advisor: Janine Black

"Bringing Electric Vehicles to College Campuses through Affordability and Accessibility"

Although many college students like the concept of an electric vehicle, the high costs makes them less appealing. In order to promote a higher utilization of electric vehicles among college students, these vehicles need to be within an affordable reach. Creating a program that provides additional benefits to college students with an electric vehicle could bring a higher demand for them on college campuses. Ensuring these students that they will have a place to charge up their cars would ease their accessibility to purchase one, as well as making them more affordable and thus making them more popular with people in underserved communities.

Jessie Coronel, Megan Winnicker
Faculty Advisor: Min-Chung Han

"Connection Between Social Media and Nonprofit Organizations, Environmental Awareness and Accreditation"

Social media is consistently involved in consumers' lives, and they spend countless hours on various platforms. Nonprofit organizations differ from regular businesses because they have little to no funds for marketing campaigns to raise awareness of their brand or a specific cause of theirs. In this study, consumers see a fictitious Facebook post and answer a series of questions that concern their attitude and purchasing behavior. We wanted to see the influence of the accredited organization certificates on social media users' decisions. The significance of this study for nonprofit organizations is vital because it deals with how consumers, attitude affects their donation and purchasing intention, which is crucial to their survival.

Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

Sophia Crawford, Gabriela Montes, Nicholas Francese, Maggie Santilma, Sara Asri, Iroda Kayumova

Faculty Advisor: Janine Black

"The Love-Hate Relationship Surrounding Electric Scooters"

Positive advancements in technology have brought forth innovative types of transportation in the form of electric scooters. The benefits of incorporating electric scooters into a city's transit infrastructure are substantial. Human activities are changing the natural greenhouse, and burning fossil fuel for vehicles is a leading cause of potentially catastrophic changes on Earth. To further the advancements in electric scooters, city regulators and electric scooter companies must work together to solve numerous safety concerns. Throughout our research, our group of six have found interesting data that supports improving bicycle lanes, public awareness campaigns, and rules and regulations.

Donyea Curry, Atiya Ali, Karen Kwaasi, Tiffany Talley

Faculty Advisor: Min-Chung Han

"A Market Analysis on the Public Knowledge of Period Poverty"

Twenty percent of American girls miss school because they do not have access to menstrual products. The 28 Days Project is a nonprofit organization that focuses on educating the public on period poverty, which is the lack of adequate access to menstrual products, as well providing necessary materials to those who are in need. By using social media platforms such as Twitter, YouTube, Instagram and Facebook, we plan on furthering our reach and informing the public of an issue that affects half the population.

Brittany Delman, Zachary Avera, Nichole Howarth, Ivonne Melendez, Stevet Hernandez Espana, Brian Fry

Faculty Advisor: Janine Black

"Why High Vandalism"

In regard to electric vehicles, our team has decided to research the idea of why high vandalism is happening with these vehicles in certain locations. After reviewing some articles, our team has found that many of these instances are due to locals not supporting the idea of these scooters/vehicles. Locals are complaining about how riders are leaving them "smack-dab" in the middle of the sidewalk and are blocking the way for others. Also locals complain that riders feel like they can "zip through and around traffic" without obeying traffic signals or rules, so locals are taking action into their own hands and ripping off these vehicles in drastic fashions.

Michael DePalma, Avishka Hettigoda, Alex Frank, Jeremiah Gamo, Daniel Dasilva

Faculty Advisor: Min Chung Han

"Saving Our Planet with Our Oceans"

Oceans and the life found inside them are being hunted, polluted, and destroyed every day. Constant travel, unfortunate events such as oil spills, and poachers continue to harm one of the largest and most important assets to us, and to our planet. NY/NJ Baykeeper keeps our vision at bay, especially by educating the public to protect-preserve-restore; being able to reach out to more people with a larger marketing strategy will increase the impact. Social media market impact is light on their platforms; having more organized events and stronger posts will help with brand recognition and the backbone of the company. Doing this will increase the overall reach of protecting our waters, and spread more awareness.

Aissatou Diallo, Tatian Moreno, Jessica Soo, Daniella Quiasua

Faculty Advisor: Thomas Abraham

"A Case Study of Novozymes A/S and its Sustainable Practices"

Novozymes is a biotechnology company. They help solve global challenges: climate, water, sustainable production, and consumption. Our research hypothesis is that Novozymes' mission for sustainability has improved its performance and increased their innovative abilities. We will test our hypothesis using the case study research method to collect and analyze data on how Novozymes carries out sustainability practices. Data will be primarily collected from sustainability reports, annual reports, and other media. Data will be analyzed using the Global Reporting Initiative (GRI) guidelines, triple bottom line, and other sustainability concepts. Once the outcomes are completed, the overall results will be presented.

Aissatou Diallo, Julie Santner, Edward Pinto, Siyu Duan, Chenyuan Kong

Faculty Advisor: Min-Chung Han

"A Market Analysis of the Viability of Watsons: Hong Kong in the United States"

Watsons is the largest health care and beauty store in Asia and Europe, maintaining a large market share and brand presence there. Would this company be able to survive in a North American market? This research will use PESTLE analysis (political, economic, social/cultural, technological, environmental and legal) to compare the American and Hong Kong markets in order to determine methods that will yield the most reach, gain new consumers, and overcome competition. An omni-channel marketing campaign will be designed for Watsons as they consider the Northeastern U.S. as a potential infiltration point in the American market. Elements of the campaign will utilize electronic and tech-based marketing efforts, with a brick-and-mortar approach.

Vincent Donofrio, Andrew Tantillo, Samantha Estenes, Cristian Hernandez, Amanda Carvalho

Faculty Advisor: Valerie Vaccaro

"Marketing Communications Strategies of Top Farm-to-Table Restaurants in the New Jersey/New York Area"

According to *Business Insider* magazine, one key trend in 2020 is for consumers to have health-conscious dining, and this can have an impact on the restaurant business (McDowell, 2019). Also, *Hospitality Magazine* identified a growing related trend of farm-to-table restaurants. Our team will review secondary research on the restaurant industry. We will analyze popular farm-to-table restaurants in the New Jersey/New York area with regards to their marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, etc.). Our goal is to develop a marketing communications plan for JBJ Soul Kitchen in New Jersey — which serves delicious, locally sourced, farm-to-table meals — for paying and in-need (food insecure) customers.

Samantha Estenes, Waleska McLafferty, Vaishali Sindha, Xingyi Chen, Jiahui Cong

Faculty Advisor: Min-Chung Han

"Facing the Competition in the U.S. Cosmeceutical Market: Can Sasa Break Through the Siege and Succeed?"

As a provider of cosmetics and drugstore products to consumers, Sasa's success in Hong Kong may be expanded. But would this company be successful in the United States considering its diverse product base? The investigation of this question can be shown through research regarding whether or not Sasa can survive in the United States, aggressive drugstore market. Through the analysis of political, economic, socio-cultural and technological aspects of the United States market, while inspecting the attitudes of consumers within the country, and how Sasa's products would transition from one market to another, an omni-channel marketing campaign will be designed to assist in the transition of Sasa from Hong Kong into the United States.

Matthew Ferrer, Abigail Rafael, Isaiah Garrovillas, Womi Goll, Tyler Schwartz

Faculty Advisor: Min-Chung Han

"Digital Marketing Strategy for Fulfill NJ"

Food banks play a major role in the food aid sector. Fulfill of Monmouth and Ocean County specifically serves the food banks of Monmouth and Ocean County by providing food, kids' feeding programs, mobile pantries, culinary training, tax refund assistance, SNAP enrollment assistance, affordable health care and other hunger fighting programs. By researching their current programs and marketing channels, we will create a digital campaign, creating digital marketing strategies to promote their programs. Through the creation of a new strategic digital campaign, Fulfill's programs can better serve their local community.

Nina Fredella, Christopher Jaipersaud

Faculty Advisor: Ipek Kocoglu

"Increasing Access to Healthy Meals: WholeHearted Creations"

The 2018 Food and Health Survey findings suggest that 70 percent of Americans are willing to give up a familiar favorite food product for a healthier alternative that does not include GMOs. However, it also shows that Americans consume fewer health-conscious meals due to the cost and lack of access to healthy food options. In this research we offer a new idea for health-conscious meal delivery. We design a new company — WholeHearted Creations that will operate in online and traditional platforms to offer healthy and customized meal options to those who want to have access to healthy meals. We feel this is a need to many people in our society. Our company will be all about maintaining a healthy lifestyle, even for those who live a fast and busy life.

Tahj Gaillard, Richard Guelig, Pedro Perez, David Leong, Mardochee Romei, Luis Tavarez

Faculty Advisor: Ipek Kocoglu

"Winning the Succession Battle: Examining Fortune 500 CEOs"

Chief executive officers are pivotal in determining the performance of their companies. Upper echelons theory has long established that top manager characteristics are essential in predicting their firm's performance. It focuses on attributes such as personality characteristics, narcissism, or humility to explain what CEO characteristics make firms successful. While past research has looked at the negatives of CEOs characteristics in understanding why CEOs fail or fall into ethical transgressions, this research will focus on the positive characteristics that promote leaders to the CEO position of successful firms. Using data from Fortune 500 CEOs, we explore how these characteristics can boost employee morale, enable better resource management and commanding through vigorous leadership. We contribute to the research on strategic leadership by showing the common traits among Fortune 500 CEOs that correlate to CEO success.

Cristina Gallagher, Maria Solano de la Sala Torres, Jason Evans, Francisco Ruizdiaz, Josef Kakish

Faculty Advisor: Valerie Vaccaro

"Marketing Communications Strategies for Socially Conscious Restaurants in the U.S."

According to *Touch Bistro*, an important trend for restaurants is to have socially and environmentally responsible practices, which address issues of importance to socially conscious consumers. We will investigate select restaurants and related nonprofit organizations with social missions in the U.S. (in NJ, NY, GA, and CA). The analysis will focus on the organizations' marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, partnerships, etc.). Our objective is to generate a new marketing communications plan for the JBJ Soul Kitchen nonprofit organization in New Jersey run by the Jon Bon Jovi Soul Foundation, which has the mission to serve delicious, locally sourced, farm-to-table meals to paying and in-need customers.

Jennie Gedeus, Sabrina Gonzalez, Carla Pizzutiello, Emily DeFalco, Deysi Cajamarca, Caroline Flood

Faculty Advisor: Ipek Kocoglu

"Does Having a Female Senior Executive Help the Firm Succeed: Gender Equality in Strategic Leadership"

In today's world, it is rarely seen that gender diversity takes place in the executive manager's position. It has been observed for years that females in high management positions have a higher effective rate than males. This has been proven in the success in many firms worldwide and is continuing to do so. Other factors such as social diversity expand the behaviors of managers throughout the firm/business, and motivate other women. Actions such as these see the rise of highly skilled women. But somehow less than a third of the largest U.S. corporations have a single female senior executive. In this research study we will explain more in depth about why having more female executives in the top management team will impact firm growth.

Nicole Giaimo, Danielle Giaimo, Shudian Zheng, Mengjia Zhou

Faculty Advisor: Min-Chung Han

"How Chambers of Commerce Can Survive in the Digital Era"

In the era of the internet, chambers of commerce are facing competition from those online platforms that provide similar services. Thus, it is challenging to retain their member renewals. This study aims to identify the factors impacting chamber members' intention to renew their membership by investigating previous studies' findings related to membership renewals. The study also analyzed previous literature to determine chambers' strengths and weaknesses, as well as external opportunities and threats to demonstrate how chambers of commerce can survive in the digital era. This study provides suggestions for survival based on primary and secondary data analysis.

Marcel Graves, Destiny Strickland, Chenyuan Kong, Yixuan Ding

Faculty Advisor: Min-Chung Han

"Bring Awareness to Help Low-income Mothers"

Moms Helping Moms is geared toward aiding low-income mothers who need help providing the basic necessities for their children in New Jersey. But do enough people know about the noble effort and cause that Moms Helping Moms is trying to combat? This research answers the question of whether an organization like Moms Helping Moms can benefit from a strategic marketing plan to bring awareness to New Jersey residents about this organization's mission and efforts to help low-income single mothers. In order to meet the diversified needs of single-mother families, we will design a comprehensive publicity plan to promote Moms Helping Moms to make sure that the mothers in need get the help necessary to raise healthy children.

Marcel Graves, Aayush Sharma

Faculty Advisor: Ipek Kocoglu

"Cutting Into the Market"

The majority of people take part in personal service, whether it's getting their hair styled, a facial, etc. Taking time out of your day to go to a certain location and dealing with all the inconveniences that come along with it isn't pleasant. At the moment most businesses have tried to speed up the process by making appointments and having multiple locations. What if that process can be sped up and further simplified by bringing the service right to your door? We can predict that the market demand for our service would be similar to UberEats. Their business gets more than 15 million orders in a quarter of a year. This level of demand would be identical if we were able to build a business that offers personal service right to your door.

Ulysses Green

Faculty Advisor: Sut Sakchutchawan

"Business Strategies for a Competitive Advantage: An Innovation Case Study"

Organizations must make exceptional strides to have a well-defined strategy that will survive in today's competitive market. Establishing strategies that are efficient and effective will directly result in assisting the firm's long-term viability. These integrative standardized strategies allow firms to operate to meet their objectives. This paper aims to identify the key components that make certain business strategies successful. With the proper strategies identified, the firm can utilize them to run optimally and possibly achieve a competitive advantage. This paper will include a case study of an innovative company with an exceptional business strategy with an analysis of the components that give the firm its competitive advantage.

Research supported by: Research Recruits program, Kean University

Emily Haddad, Danielle Brewer, Annabelle Sheynman, Marian Santos, Marco Lagera

Faculty Advisor: Min-Chung Han

"Let's Go 4 the Goal and Score!"

Go 4 the Goal is a nonprofit organization that focuses on helping children with cancer achieve their goals. The organization alleviates a child's battle that he or she faces through financial support, granting personal wishes and helping provide the best care for patients and their families. In America, cancer is sadly prevalent, and this organization helps children through support and aid. Through our research, we will implement marketing tactics that will capitalize on the importance of the health of the children and create more media presence for the organization. By enhancing their marketing with popular ways for people who want to help this cause, get involved with Lace-Up, Spring Into Action, and National Pediatric Cancer Awareness.

Dylan Handelman, Jeanne Lewkowicz, Enrique Hurtado, Travis Perrone, Andrew Luzzi

Faculty Advisor: Janine Black

"Bringing the Charge Without Charging a Whole Lot"

As electric transportation is still an upcoming market, it is not so widespread yet. While highly populated areas such as which Portland, Los Angeles and Sacramento have begun to see the effects of having electric vehicles, most of the country has yet to see, let alone hear of, the possible changes. If we want a clean electric world of tomorrow, key policies must begin to be placed. The reach of electric accessibility must be nationwide — obtainable to consumers outside the initial target market. Following up, we must heighten awareness of electric mobility options; most consumers are still ignorant of all the electric options that are available instead of just a customary gas-guzzling automobile.

Lauren Honan, Amy Drahos, Troy Ewen, Matt Purpuro, Nick Mandaro, Ricky Fichtner

Faculty Advisor: Janine Black

"Reducing Pollution One Meal at a Time"

Research question: How would implementing a solar-powered delivery service for Kean students reduce pollution? Abstract: In the quest for reducing pollution, Kean University has been looking into the opportunity to bring clean energy options to our campus. Our group's proposal is to invest in the Starship Food Delivery system. The Starship Food Delivery system uses a combination of autonomous robots and mobile technology while partnering with stores and restaurants on and around campus, making local delivery of food faster and more energy-/cost-efficient. We chose to implement a food delivery service due to the fact that when students are opting to leave campus, it is most often to get food.

Ashley Hunt, Kimberly Salas, Christine Vaneus

Faculty Advisor: Ipek Kocoglu

"Sip N' Play: A New Franchise"

Research by the American Psychological Association shows that 45 percent of college students are stressed and struggle to find healthy distractions. Behavioral science studies show that socializing is the best way to relieve stress. Further studies show that students eat out more than four times a week. However, finding options that can relieve this stress is the main challenge. Driven by these findings, we developed a new concept of an affordable chain of bar-restaurants that offer entertainment tailored for college students. On a Friday night, when you're looking to relax after a long stressful week, how are you going to take the edge off? Sip N' Play is here to relieve stress by offering a socializing setting with arcade, games, and affordable meals.

Adelina Iscoa, Amani Griffith, Luis Jimenez, Jesse Akaba, Abigail Anne Rafael

Faculty Advisor: Valerie Vaccaro

"Marketing Communications Strategies for Socially Conscious Restaurants Around the World"

According to *Forbes* magazine (Aziz, 2018), there is a social innovation trend in the restaurant industry with new business models for socially conscious restaurants that address social justice causes, such as food insecurity, sustainability and ethical sourcing. Our team will research restaurant industry trends with secondary data (e.g., industry reports and industry news). We will conduct a competitive analysis of unique restaurants with social missions in various countries for the organizations' marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, and other areas). Our project objective is to generate a new marketing communications plan for the JBJ Soul Kitchen nonprofit community restaurant chain in New Jersey run by the Jon Bon Jovi Soul Foundation.

Cristina Pena Jimenez, Joalis Valdez, Zyasia Nash, Josselyn Ballesteros, Jazzmin Mitchell, Alexander Ramos

Faculty Advisor: Ipek Kocoglu

"20 Years of Gender and Racial Diversity in Fortune 500 Timeline"

Research places critical importance on diversity in the top management teams of firms. It is indicative of proactive efforts to eliminate gender or racial stereotypes guiding the strategic decisions and actions. Past studies addressed the effects of gender diversity, the causes that hold female leaders from shattering the glass ceiling and the unexpected consequences of female presence in top management. The purpose of this study is to determine how gender of Fortune 500 firms changed over 20 years. We present a timeline of progression through examples from the 100 Fortune 500 firms for 20 years (1999-2019). We build on past studies to show how gendered stereotypes changed to highlight the critical role of female CEOs in company decisions.

Research supported by: Foundation Faculty Research Award, Kean University Foundation

Angela Jovinelly, Mike Bowden, Ciarra Leonard

Faculty Advisor: Janine Black

"Safe Ride: How to Elevate the Safety of Micro-mobility Vehicles"

Research question: Why are various micro-mobility companies banned in multiple cities/campuses? What can be done to improve these restrictions? Abstract: Our research will illustrate the initiatives universities must implement in order to create a safe riding environment for consumers of dockless electric scooters. The changes outlined in our research will hopefully create a change across the nation. As technology and the environment is changing rapidly, it is important to find alternative solutions for college students to get accessibility to various forms of transportation.

Connor Juzefyk, Andrew Hopper, Puneet Kumar
Faculty Advisor: Dawn Amads-Harmon

"Interdisciplinary Integration of Business Principles of Undergraduate Student Volunteers"

Businesses operate successfully when full integration of business disciplines are realized (Ter Chian Tan, Shan, & Zuo, 2014). Asset allocation is dependent on the understanding and needs of each department and how all of the specialties contribute to organizational objectives. Front-end and back-end business field integration is tightly coupled and interdependent (Ter Chian Tan, Shan, & Zuo, 2014).
Students at Kean University take various classes and learn different aspects of business independent of one another. This qualitative study used questionnaires with business students and with student officers to ascertain how volunteering as a student board member contributes to learning how business disciplines integrate versus siloed learning. The findings show that volunteering as a student board member assists students in understanding how business disciplines fit together, and students learn how one discipline relies on another to achieve club objectives, thus more effectively preparing students for their business careers.

Gabrielle Kaczan, William Krzewick, Brando Alulema, Ali Beh, Tyler Schwartz,
Faculty Advisor: Janine Black

"Ridesharing Companies in a Foreign Market"

Consumers are always looking for the most efficient, cost-effective, and sustainable way to travel. Electric vehicles are becoming more of a priority for those who are eco-friendly than ever before. Furthermore, the sharing economy has grown vastly from this sustainable movement. Ridesharing and dockless companies have sought to capitalize on this opportunity by creating mobile apps and vehicles to help consumers get from point A to point B in the cheapest, fastest and most convenient way. Companies like Uber and Lime had success in America, but struggle in other countries. For new companies, it is difficult to determine what business model would be the most effective for the different markets they wish to enter. For example, what works in the U.S. might not work in France due to cultural differences, lifestyles, and values. The intent of this research is to determine what business model would be the most effective for ridesharing and dockless companies entering the European market.

Josef Kakish, Donovan Gadson, Andre Rivers, Jared Romero, Moses Kabineh,
Faculty Advisor: Ipek Kocoglu

"Bridging the Core Values Gap for Small Businesses: Lessons from Industry Leaders-Volvo, IKEA and IBM"

Of the broad range of factors examined in firm success, corporate values are proven to be the most critical factors that allow organizations to outperform. While research mainly focused on how corporate values leverage company performance, it merely scrutinizes what are the common core values that distinguish exceptionally successful firms from small businesses. In this study we evaluate the core values shared by some of the most successful companies, including the world's leading automobile manufacturer, Volvo; the famous European multinational furniture retailer, IKEA; and one of the world's first technology manufacturing companies, IBM. We show that these companies have experienced remarkable organizational growth trends driven by the core values they practice. Our observations show the success that industry leader companies incur through the creation and implementation of distinctive core values that small businesses fail to practice.

Joanna Kruszewski, Marissa Gorlewski, Nicole Hotz, Anne Rigueur, Giuseppe Panza
Faculty Advisor: Janine Black

"Scooters Are Not As Eco-friendly As They May Seem"

Scooters were created as an alternative to be a cleaner way to travel. While scooters are definitely a cleaner alternative for travel than cars, trains, and buses, they also have an impact on the environment. Although they provide a fun, fast and convenient way for young adults to get around, they are not as clean for our environment as we thought. Researchers in North Carolina State University found that traveling by scooter produces more greenhouse gas emissions per mile than by traveling by bus, bicycle, moped or on foot. The cause for this are the materials used to make the frame of the scooters, the wheels and the battery.

Allison Kuhn, Rushik Patel, Stefanie Talbot, Dalton Steever, Arianne Charalambopoulos
Faculty Advisor: Janine Black

"Electric Buses on Kean University Campuses."

One of the leading concerns among many is the rise of global warming. The world energy crisis has brought light to electric vehicles in the automotive field. Among alternative options for transportation, electric buses have recently been a new trend in many areas. This paper will present the idea of electric buses on Kean University campuses in New Jersey. Transportation is one of the biggest factors of student success, and one of the key tools to getting students to class on time. Many students don't have the privilege of getting inexpensive transportation, or the opportunity to get a reliable ride to campus. This will demonstrate positive changes to the environment, as well as creating ways for students to reduce expenses.

Puneet Kumar, Melissa Dommercant, Christian Gleim, Frances Ranola
Faculty Advisors: Byeonghwa Park, Kihwan KIm

"The Impact of Motivational Reading on Social Entrepreneurial Intention"

Social entrepreneurial intention refers to an individual's desire to start a social enterprise in the near future. Past studies explore individual differences such as gender, personality, traits, and attitudes, which have an association with social entrepreneurial intention. However, few studies have been done on how to promote social entrepreneurial intention. Grounded on vicarious learning theory, the current study examined whether reading an inspirational story of social enterprise influenced people's social entrepreneurial intention. This study found that emotional intelligence fostered social entrepreneurial intention through social entrepreneurial self-efficacy and justice advocacy.

Rene D. Kunuria, Huaigu Liu, Tatiana Moreno, Safiena Salama
Faculty Advisor: Shanggeun Rhee

"The Greater Elizabeth Chamber of Commerce Strategic Plan"

The Greater Elizabeth Chamber of Commerce (GECC) serves to enhance the interests of local businesses in the city of Elizabeth by advocating, inspiring, and networking. Recently, the GECC has come under new leadership and had requested a review of the chamber of commerce to understand why the organization wasn't as effective as it should be. Examining the GECC, we conducted a series of questionnaires and surveys for a better understanding of the structure and shape of the organization. To further assess the issues of the GECC, we created a strategy report supported by our questionnaires and surveys to help us achieve growth and a more effective GECC.

Rene Kunuria, Tatiana Moreno
Faculty Advisor: Shangguen Rhee

"New Technologies, Environmental Uncertainty, and HRM"

Insurgency of advanced technologies shakes the business world in two ways. The first is to see it as a positive and productive shaking of business in that new technologies innovate the way to do business and create new jobs that are conducive to innovation. The second notion is that arrival of emerging technologies is disruptive because it changes the way of doing business and destroys the current existing jobs. Whether it is a positive or negative impact on the business world, one truth is that it increases the environmental uncertainty in business. This study aims to see what actions organizations can take to alleviate the insecure perception of the future by employees and how they can be implemented.

Mitchell Lanzl
Faculty Advisor: Kihwan Kim

"Chicken or Egg? Reciprocal Mediating Effects of Team Cohesion and Team Performance"

Team cohesion and team performance have been the most highlighted topics in team literature. Studies found that team cohesion served as an antecedent of team performance, or a mediator on another emergent state and team performance. Another stream of research discussed that team performance could also influence team cohesion, raising the possibility of the existence of a reciprocal relationship between team cohesion and team performance. Several studies demonstrated reverse causation and reciprocal relationships. Grounded on the findings on the reciprocal relationship between team cohesion and team performance, this study attempts to examine the reciprocal mediating effects of team cohesion and team performance in the relationship with trust.

Mitchell Lanzl
Faculty Advisor: Kihwan Kim

"The Impact of Motivational Book Reading on Attitude Changes: the Mediating Role of Emotional Intelligence"

Similar to the impact of core self-evaluation on employee's performance, students' core self-evaluation influences academic performances as well. In particular, self-efficacy, locus of control, and self-esteem had a positive impact on GPA, retention rate and satisfaction with college life. In spite of the importance of students' attitudes, there have been few studies on how attitudes can be developed. Grounded on vicarious learning theory, the current research examined the impact of motivational book reading on the development of self-efficacy, self-esteem and locus of control. A total of 68 business-majored students participated in the experiment and showed a significant increase in self-efficacy and locus of control, but not self-esteem.

Mitchell Lanzl, Rose Ann Benito, Jan Noel
Faculty Advisors: Kihwan Kim, Byeonghwa Park

"A Critical Success Factor Model of the Prison Entrepreneurship Program"

Recidivism is one of the haunting social problems and stakeholder groups of this issue, including the government and nonprofit organizations, have struggled in fighting this problem. Statistics show that 563 people out of every 100,000 are incarcerated in the correctional facilities. Recently, the Prison Entrepreneurship Program (PEP) shed a silver lining on the effort to reduce the incarceration rate. Many successful cases of reducing recidivism have been reported. However, despite the numerous successful cases of PEP, few efforts have been made to develop the theoretical framework of PEP, which enables the practitioners to replicate PEP without trial and error and the researchers to test the effectiveness of PEP scientifically. By analyzing 14 successful PEPs, the current study attempts to suggest a critical success factor model that embraces personal, organizational, and environmental levels. Based on the proposed model, the study discusses the practical implications of the model and future research issues.

Michael Lapczynski, Daniela Mendes, Scott Reid, Grace Confino, Bruce Weyand, Isaac Neyman

Faculty Advisor: Ipek Kocoglu

"Attracting Qualified Employees through Organizational Culture: What Makes a Company Desirable to Work For?"

Each organization brings forth a type of culture and structure to create the atmosphere a company will have. Firms place an emphasis on various aspects that make up an organizational culture within their organization to grow and expand the benefits they get by having a particulalry innovative or people oriented or cutomer oriented company culture. However, the common characteristics of an organizational culture that create a company that is higly desired to work for are largely ignored in the organizational culture literature. Therefore, in this research project assessing the main cultural characteristics adopted by the 100 best companies to work for, we aim to highlight what characteristics of an organizational culture companies need to focus on to attract highly qualified employees and be considered a promising company to work for. By comparing the Fortune's 100 best companies to work for with some of the remaining Fortune 500 companies' culture, we will show what makes an organizational culture desirable and allows them to attract and retain a highly qualified workforce.

Daniel Ledesma, Moira Villajuan, Chenyuan Kong, Allen Tran, Yuanling Peng

Faculty Advisor: Valerie Vaccaro

"An Analysis of Food-Related Social Enterprises' Marketing Communications Strategies"

According to *Forbes*, "consumers, employees and investors expect companies ... to help solve the world's most pressing problems like food insecurity" (Pollizzoto, 2019). There is a growing, innovative trend of both for-profit social enterprises and nonprofit organizations to address food insecurity in homeless and low-income populations around the world. We will review secondary research and conduct an analysis of select food-related for-profit social enterprises and nonprofit organizations' marketing communication strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, partnerships, and other areas). Our objective is to develop a new marketing communications plan for the JBJ Soul Kitchen nonprofit organization in New Jersey.

Yiqi Lei, Puneet Kumar, Cindy Noel

Faculty Advisors: Kihwan Kim, Byeonghwa Park

"Bridging the Gap Between Academia and Supply Chain Industry"

Bridging the gap between academia and supply chain industry is a constant system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer. There is growing concern about the mismatch or gaps between academic education and industry standard. This research is to identify the required skills needed by industry. Data will be collected from the job advertisement websites because highly sought after skills by industry can be found on the job description and job qualification of job advertisements. The findings will help bridge the gap between academia and industry. Besides, it will provide invaluable information for job seekers on what to prepare for their future careers.

Jia Lv

Faculty Advisor: Kai Wang

"Using Artificial Intelligence in Business"

This research focuses on the use of AI in business. With the progress of science and technology, more and more people pay attention to AI and apply AI in more business scenarios. AI can use computational power to help people, such as conducting analytical problem-solving and facilitating decision making. AI can help people analyze and take advantage of big data. Large shopping websites like Amazon can collect and utilize customers' preferences through AI. However, it also raises some important questions: can AI replace human decision-makers in some ways? What is the boundary of AI usage? This article will discuss the application of AI in different business scenarios to analyze the impact of AI and when it should be used.

Research supported by: Research Recruits program, Kean University

David A Macrina, Joseph Papa, Lorenzo Scala, Cody Zsoldos

Faculty Advisor: Janine Black

"New Jersey E-Bike Program Proposal: Building Transportation Accessibility in Underserved Communities"

With the goal of increasing accessibility of electric transportation in underserved communities in New Jersey, this project proposes the implementation of an e-bike program. Characteristics consistent with the Transportation Research Board that define underserved communities are areas with high rates of zero-car households, high unemployment rates, and areas populated with late-night commuters. Research supports that accessibility to traditional bicycles can greatly impact the level of employment in a community. Advancements being made in electric transportation are believed to increase these effects. The research in this project will provide suggestions on how to successfully implement such a program on a social level as well as a business level.

Samantha Martone, Arnaldo Aviles, Nicole Ramirez, Michael Santillo, Nehemie Fils-Aime

Faculty Advisor: Thomas Abraham

"A Case Study of American Water Works and its Sustainability Strategy"

American Water Works is a public utility corporation (NYSE: AWK) operating in the United States and Canada with headquarters in Camden, New Jersey, focused on clean, safe, and reliable water. Our research hypothesis is that American Water Works' sustainability practices improved shared value and increased business profit. Our team will use the case study research method to obtain and analyze data on American Water Works, primarily focusing on sustainability. We will collect our data from secondary sources such as company sustainability reports, annual reports, and media outlets. The data will be analyzed using the Global Reporting Initiative (GRI) guidelines, the concept of shared value and other frameworks from our course.

Pablo Marza, John Bernales, Victor Brannon, Fernando Centurion, Mitchell Martucci

Faculty Advisor: Michael Suen

"We Will Do Research on the Chairman of the U.S. Federal Reserve, Jerome Powell"

In this research project, we will look into the life of Jerome Powell (chairman of the U.S. Federal Reserve). He plays a huge role in the U.S. The research will include Powell's background; then we will go into his role as chairman. We will go in depth with some decisions he has made as a chairman.

Salimah McCullough, Jeremy Maharaj, Phoebe Darot

Faculty Advisor: Min-Chung Han

"Helping to Strive for Poverty Reduction: The Robin Hood Foundation"

Nonprofit organizations have grown tremendously in the last three decades. In ensuring the sustainability in this organization, The Robin Hood Foundation is currently promoting collaborative efforts between the government and social organizations. The importance of business management is that any business needs a business plan, including nonprofit organizations. Our business plan includes implementing social media usage to grow an online presence. This helps promote the brand and build awareness across multiple generations. We want to provide a large range of services to improve the quality of the organization and to get more people involved and aware.

Joseph McNulty, Daniel Lee, Tyler Brookes, Justin Arrendondo, Nicholas Moffa, Bryce Berger

Faculty Advisor: Ipek Kocoglu

"How Do Fortune 500 Firms Support Sustainable Development Through Their Core Values?"

The 2030 United Nations (UN) Agenda focuses on social, economic, and environmental dimensions of sustainable development goals (SDG). It leads to a growing interest in understanding how companies create a culture that embraces core values aligned with these SDGs. In this study we examine the core values that help Fortune 500 companies to create a company image that parrallels with SDGs. We will show that by focusing on values such as integrity, teamwork, people focus, respect and innovation, successful Fortune 500 firms are able to create a work environment where organizational members are committed to social, economic, and environmental sustainability. We highlight that core corporate values may as well have an indirect influence on the social, economic, and environmental advancement of our world.

Mia Meng, Jesse Akaba, Alondra Fernandez

Faculty Advisor: Min-Chung Han

"Improving the Westfield Chinese American Organization"

As members of the minority community, we believe it is important for us to gather together and strengthen the culture. The Westfield Chinese American organization aims to unite people of all ethnic backgrounds. While the goal is noble, the organization is not catching enough eyes. We aim to strengthen the presence of the nonprofit in the community as well as online. First we plan to perform Search Engine Optimization (SEO), making the organization more relevant online, and to work on the Google Keywords to increase the quality and quantity of website traffic by increasing the visibility of a website. SEO refers to the improvement of unpaid results and excludes direct traffic/visitors and the purchase of paid placement.

Mikie Mirjah, Pradeep Krishnan, Parth Chauhan, Miamore Baez, Willella Talmadge, Folasade Adenodi

Faculty Advisor: Ipek Kocoglu

"Analyzing the Diversity Reports of Top Tech Firms in Fortune 500: Efforts to Close the Minority Gap in the Workforce"

Gender and racial diversity have been uncommon throughout many Fortune 500 companies. Recent efforts to close the minority gap in the workplace have resulted in top companies disclosing the diversity of their workforce through Annual Diversity Reports. In this project, we will be examining how gender and racial diversity in the top tech companies of the Fortune 500 such as Apple, Google, Facebook, and Microsoft have changed over the course of 20 years. We will be tracking when this change in racial and gender diversity began and peaked, and how it has affected these firms. Before 1999 an effort to recruit diverse workers was barely being made, compared to 2019 when around 35 percent of firms reported being diverse with regards to the number of women and racial minorities in their workforce. Studies show that diversity within these companies has not been a priority because they believed it would affect the performance of the company, which was eventually proven wrong.

Brian Monello, Brandon Couto, Angel Palacio, Caitlin McGovern, Steven Karas, Daniel Olenick

Faculty Advisor: Ipek Kocoglu

"Unveiling the Sectoral Dynamics of Highest Growing Firms"

Understanding the sectoral composition of the fastest-growing firms is critical. It informs on how firms operate in certain economic sectors and what the factors are that contribute to their exceptional growth. Past research showed that technology is arguably the main factor as to why firms are exceeding their competitors and growing fast. In this research, we will take a closer look at some of these fastest-growing firms and see what sectoral conditions are driving their success. One of the compaies that we focus on is Netflix, an online streaming site that allows you to watch movies or TV shows at a reasonable price on your television, laptop, gaming system, etc. Netflix will without a doubt continue to grow in the near future, as long as they keep updating their selection of movies and TV shows for their viewers. Our research reveals that the majority of the fastest-growing companies are listed under technology sectors. It suggests that as tech industry trigger their growth, these firms are essential in further advancing our economy. This study aims to unveil the secret behind the highest growing companies and how their sectoral dynamics help them to do so.

Jamie Montalvo, Ada Chan, Amanda Carvalho
Faculty Advisor: Min-Chung Han

"Animal Cruelty Awareness"

Many animals are put into shelters every day and often face desperate circumstances or death; giving them a second chance is what we are hoping to do. Animal cruelty is a serious problem all over the world today, and in order to save these creatures, we need to raise awareness and teach the public how to properly care for animals. We will be promoting this nonprofit organization on social media as well on our personal blogs. This way we'll be able to raise awareness as well as donations for animals in need.

Lori Mostacero, Tina Whitt, Yadira Bravo, Kaitlyn R. Heimall, Chantise Spikes
Faculty Advisor: Valerie Vaccaro

"Restaurant Trends, Food Insecurity and Top New Jersey Restaurants' Marketing Communications Strategies"

Every year, *New Jersey Monthly* magazine publishes a list of "The 30 Best Restaurants in New Jersey." Our team will conduct an analysis of a sample of the best New Jersey restaurants' marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, alternative media marketing, and other areas). We will also investigate restaurant trends and the social issue of food insecurity with secondary data. Based upon the findings, our goal is to generate a new marketing communications plan for the JBJ Soul Kitchen in New Jersey with the mission to serve delicious, locally sourced farm-to-table meals to paying and food insecure customers. According to the USDA, "in 2017, about 865,900 people, including 260,340 children, in New Jersey were food insecure. That means 1 in 10 individuals (9.6 percent) and 1 in 8 children (13.2 percent) live in homes without consistent access to adequate food … to live healthy, active lives" (NJ Department of Health).

Elizabeth Naecker, Natalie Gazdowicz, Gianna Fiocco, Kassidy Kane, Walter Mills
Faculty Advisor: Janine Black

"A New Era: The Benefits of Introducing Electronic Vehicles to College Campuses"

As the world of technology evolves every day, we as consumers need to be able to adapt and conform to the changing times. The best way for technology companies to marry new technology into the world is through the younger generations. Companies around the world are constantly inventing new things to better adapt to our innovative society. Introducing electronic vehicles onto college campuses is a beneficial way to sustain this future trend. Students, professors, and administrative staff could all utilize the benefits of these electronic vehicles around campus. Studies have shown that the positive advantages outweigh the negative. These benefits of introducing electronic vehicles to college campuses will lead us into the new era.

Ismeta Nikovic
Faculty Advisor: Ipek Kocoglu

""Thunder" (Thunder-Pods, Thunder-Band)"

Deaths related to neurological disorders such as epilepsy, migraine and neurological injuries such as cerebral aneurysm increased by 39 percent in the last 13 years. Further, the number of patients with neurological conditions raises dramatically each year. The number of people with epilepsy increased by 70 percent and the number of strokes largely occurring in people aged 75 years and older and in minorities is expected to double by 2050. This is a starkly shocking situation given that the average number of deaths decreased by 6 percent. In this entrepreneurial project I aim to invent and launch a product that can continuously monitor the neurological changes in people. My goal with this project is to decrease the mortality rate caused by neurological disorders and conditions.

Jeffrey F Noyola, Christian Newman
Faculty Advisor: Ipek Kocoglu

"Understanding the Style of College Students: Affordable and Convenient at Young Cutz"

Looks matter for college students. They are in constant need to navigate their professional look for their job interviews, class presentations, and existing positions in their jobs. However, according to surveys, time and expenses are the most important two factors that challenge them in creating their desired image. Motivated by this, we are working on founding a new business, Young Cutz Barbershop, to offer convenient and affordable grooming services for Kean University students. A total of 11,824 students are enrolled at Kean, among which 84 percent live on campus. By doing a survey, we identify the specific needs and demographics of the potential market. Further, by examining the main competitive actors including Cutcity Barber Shop that appeals to Kean.

Alexis Pacheco, Ralph Schwerdtfeger, Altagracia Santos, Nicky Rolo, Peter Honczaryk
Faculty Advisor: Ipek Kocoglu

"Success That Starts With You"

The main purpose of this research is to provide examples of the top qualities that make up leaders of successful Fortune 500 companies. These qualities drive the company's success because a top leader will inspire their employees with new ideas so that the company will continue to succeed.

Erika Paredes, Gerald Davis, Mara Pereira, Joseph Kimball, Joel Coello
Faculty Advisor: Ipek Kocoglu

"Capitalizing on a Diverse Company Culture: The Role of Creativity and Work-Life Balance"

Studies highlight the importance of a positive and diverse culture in a company for a successful business. While diversity is shown to lead to desirable performance outcomes for firms, past studies have failed to recognize that the success of a company is not only from its diversity, but just as much from how the organization capiatlizes on that diversity. In this study looking at the top 100 companies to work for in 2019, we found that most of these companies have similar tendencies in hiring people of diverse backgrounds and of different gender and race. Through extensive research we show that a positive and diverse culture can provide a significant competitive advantage when complemented with creativity and a healthy work-life balance.

Aaron Pascall, Olivia Cardet, Christina Arroyo, Nicodemus Kibagendi, Carlos Claros, Kayin Childress
Faculty Advisor: Ipek Kocoglu

"Does Board Diversity Lead to Socially and Ethically Responsible Corporate Decisions?"

The board of directors is responsible for the main strategic decisions that a company makes. It consists of a diverse body of individuals with various backgrounds that are engaged in the process of approving the firm decisions. The diversity of the boards is shown to be critical in determining how boards operate such that it oversees the management with regards to protecting the interests of all stakeholders. It is evident that as more companies go global, they will be forced to adapt to be able to deal with different cultures and politics around the world. It leads to an increasing need for companies to have board members with diverse backgrounds. In particular, research suggests that it will allow for more independent decisions that are well informed about the international arena and more sensitive about social issues. In this study we explain how the diversity in a board of directors leads to corporate social responsibility activities. By using data from the top Fortune 500 firms, our research will reinforce studies that have shown that a more racially diverse board influences the social and ethical commitment of the firm.

Aaron Pascall, Chenying Li, Yixuan Ding, Jia Lv, Wali Pierce
Faculty Advisor: Valerie Vaccaro

"Marketing Communications Strategies for Beauty/Skin-Care Firms Targeting the U.S. and China"

According to Twincraft.com, the male grooming market is forecasted to increase at a compound annual grow rate (CAGR) of 5.2 percent to reach 60.7 billion by 2020 worldwide. In addition, the cosmetics industry in China is growing at a fast pace (Statistica.com). According to CNBC, beauty industry sales in China will surpass the U.S. in 2023. We will do an analysis for key companies that market skin-care products to male consumers, as well as for cosmetics companies that market in China. The analyses will include reviews of select firms' marketing communication and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships and other areas).
Our objective is to generate new marketing communications plans for Thrive Causemetics' potential diversification into lucrative global markets for mens' skin-care and women's cosmetics in China.

Nisarg Patel, Nicholas Fernandez, Roberto Alcivar, John Purnell, Colin Barner, Javon Harris
Faculty Advisor: Ipek Kocoglu

"Does Racial Diversity in the Boardroom Impact Total Return on Investors?"

Demographic diversity is important for the management discipline because it is imperative that a thorough understanding and implementation of demographic diversity is part of our historical, social, and economic reality. Diversity in the board of directors allows for a more accurate representation of the external environment and the interests of stakeholders. Past research shows that firms with racially diverse boards are more competitive and have a higher performance. This research will explain the impact of racial diversity in board of directors on total return for investors. By using the Fortune 500 firms' data, we compare the board composition of firms with highest and lowest total return on investors. Through this investigation, we aim to demonstrate how racial diversity in the boards of Fortune 500 firms reward its stakeholders and contribute by showing the potential impact of diverse boards on the sustainability of the key constituents.

Adrian Peralta, Wynell Morga, Meghaben Shah, Ashley Carvalho, Sarah Martinez, Adissa Simpore
Faculty Advisor: Ipek Kocoglu

"Desire for Racial Divide to Change for Better Success in Fortune 500 Firms"

The purpose of this study will be to find the underlying issue that still exists within boardrooms of Fortune 500 firms. This research will prove important to the field of management so that there are more individuals that can be viewed as qualified persons to have positions of power and not be viewed based on ethnicity alone. Our methods of research will be a quantitative and qualitative approach in order to interpret the data we search for, but also to collect data from an individualistic point of view. Our conclusion is that we were able to answer our research question and explain ways on how to decrease the gap of ethnicity that prevents a Fortune 500 firm's success within its respected industry.

Sharon Pesantes, Elsie Opio, Anthony Egberongbe, Hansol Bhak, Schnoldine Joseph

Faculty Advisor: Janine Black

"Implementing a Sustainable Method of Integrating Electric Transportation in Underserved Communities"

As a group we will come up with a competitive analysis for underserved communities to have electric transportation easily accessible. The future is in electricity, at least in terms of transportation, which is why we will do an analysis of the consumer benefits in terms of health and environmental sustainability. The analysis will include a critical review of a community's environment and social communication, such as online strategies using social media, public relations, sales promotion, products, pricing, and partnerships. Our objective is to generate a new marketing and sustainable alternative to public transportation. This will be a social mission to have transportation easily accessible and implemented all throughout communities.

Jessica Placido, Brianna Strother, Giuseppe Rizzo, Jairson Martinez

Faculty Advisor: Min-Chung Han

"Working Together for Disability Awareness"

The Arc of New Jersey is a nonprofit organization that helps those with developmental disabilities. However, due to the organization's lack of brand recognition, individuals with disabilities are often neglected in the media. Therefore, it is important to create awareness and inclusivity in our community. We hope to achieve this by recommending books regarding mental disabilities, being active on social media, and even creating apparel to promote consciousness of the situation.

Joseph E Polanco Jr., Gianna Farroni, Gian Barros, Jackelyn Corcino

Faculty Advisor: Janine Black

"Are Dockless or Electric Vehicles Becoming Alternate Transportation to Traditional Busses or Trains?"

This study examines the impact of electric or dockless vehicles on college campuses, and how those vehicles affect the environment and the use of public transportation. It is hypothesized that if there is an increase in access of micro-mobility, then the usage and pollution of public transit will decrease. Research methods include monitoring the transformation these vehicles have brought to surrounding communities and major cities. Studies will also be conducted regarding the cost-benefit analysis and safety of said vehicles as opposed to public transportation. The findings of this research study will help improve underserved communities by giving them a safer, greener, and cheaper alternative to public transportation.

Vannesa Quijada, Mature Mickens, Brian Quettent, Oscar Camacho, Ousseynou Gueye

Faculty Advisor: Janine Black

"Have Solar Powered Vehicles Lost the Race of Commercialization to Electrical Vehicles?"

Solar-powered energy is widely used, but not many car companies have taken advantage of it. So far Tesla, Hyundai and a startup Dutch company named Lightyear have announced the use of solar-powered energy in their future automobiles. The first solar-powered vehicle was invented in 1955 by General Motors, but it was only 15 inches long and housed an electrical motor. Ever since, many other car companies have developed average-car-size prototypes to demonstrate the potential of commercializing solar-powered cars. Yet, no company has publicly marketed any of the prototypes successfully. Have solar-powered vehicles lost the race of commercialization to electrical vehicles? This question is important because the use of solar-powered energy is far.

Michael Rado, Shivangi Kamdar

Faculty Advisor: Ipek Kocoglu

"Designing Smart Glasses: EyeS See'M"

Afraid of missing the perfect moment? Our team has identified the need to have a quicker, streamlined response to taking photos and videos without having to fumble for a camera or phone. Inspired by the failure of Google Glasses, TENOGGLES allows the user to instantly capture a moment in time. Other features including navigation, weather, thermal camera, and binoculars can be added. Few companies are in design stages or offering smart glasses with limited features such as taking photos underwater. By saving time, not missing opportunities to capture events, and eliminate the need to carry many devices. The global market size is expected to grow to $8.07 billion between 2019 and 2023, and our business is aiming to capture the attention of the global market through its functional value and unique marketing campaigns. The product will target consumer, industrial, and military markets.

Michael Rado

Faculty Advisor: Lydia Kaplan

"How Does Music Influence Consumer Behavior in Retail and Service Settings?"

Ambient and background music have been studied over three decades as a practical markets approach to increase customer spending in stores and restaurant settings. This research explores many of the existing studies conducted, discusses the various results, marketing ideas to increase sales and retain customers, and offers suggestions for future research that may be needed. Also, the results of a small sample live study are included.

Melissa Rivera, David Michaelangelo
Faculty Advisor: Ipek Kocoglu

"Creative Recipes with Mix It Up"

In a world where you can choose to be vegetarian, vegan, pescatarian or fruitarian alongside a whole spectrum of other dietary options, it becomes difficult to align your daily meals with your choice of diet. Customized recipes are lost among the countless pages of web searches, and even then it is difficult to make meals with the limited ingredients you may have at home. In this project we create a new aplication called Mix It Up to solve this problem by allowing users to scan the ingredients they would like to use and giving them recipe options based on their preferences.

Yesenia Rivera, Ali Beh
Faculty Advisor: Ipek Kocoglu

"New Ride in Town"

Driving can be exhausting. Many car accidents are due to careless driving and driving under the influence. According to the New Jersey Department of Transportation, in the year 2018 there were 278,413 crashes documented by all 21 counties in the state of New Jersey alone. Due to the increasing collaborative consumption in the era of sharing economy, this becomes particularly important as sharing access to services makes people vulnerable to the external risks that are shared, too. By analyzing the case of Waymo, a Phoenix-based company that offers self-driving service, we are aiming to explore the critical factors that will attract customers to a community-based online platform that offers a safe, accurate and reliable self-drive experience.

Antonae McCants Robinson, Paige Figueiredo, Anita Bravo-Gomez, Jakirah Paul, Ameenah Danmole
Faculty Advisor: Valerie Vaccaro

"An Analysis of Multicultural Cosmetics Firms' Marketing Communications Strategies"

According to a recent Mintel research report, "Today's trend-driven, multicultural women are propelling the U.S. beauty industry forward." We will review beauty industry research from secondary sources and conduct an analysis of cosmetics companies with products for multicultural women of color. The analysis will include a critical review of the firms' marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, and other areas). Our project objective is to generate a multicultural marketing communications plan for Thrive Causemetics. Thrive Causemetics' mission is that every "purchase directly impacts the lives of women, animals and communities around the world."

Minerva Rodriguez, Hillary Vidal, Viviane Montenegro, Zhang Chengchao, Zhong Yating
Faculty Advisor: Min-Chung Han

"Marketing Strategy: Introduction of Sasa to Union, New Jersey"

Sasa International is one of the largest wholesalers of the cosmetics industry in Asia. Sasa offers its customers the best in skin-care products, and beauty supplies. Due to its quality and variety of products, there are a lot of potential consumers for Sasa in the United States. Therefore, how can Sasa succeed by entering a new market like the United States? This research presents the introduction of Sasa in America's market. Starting by choosing a strategic location in Union, New Jersey, and analyzing the differences in consumers' behavior, economic, and political aspects, a well-designed omni-channel marketing campaign will be implemented. Our marketing strategy will meet the demand, and it will make Sasa successful in the United States.

Bibi Salaman, Cierra Horsley, Candice Jeanpierre
Faculty Advisor: Janine Black

"How to Make Electric Cars Accessible to Lower-income Citizens"

During this research, we seek to find program implementations that can assist in breaking the barrier between electric cars and lower-income citizens. We'll explain the findings and contributions needed to develop innovative new programs to expand electric cars beyond early adopters. We'll measure the cost of electric cars in comparison to income brackets and how this affects the implementation of subsidy programs, which will assist in bridging the gap between electric cars and low-income citizens. Finally, we'll compare/contrast city development in reference to those cities that currently benefit from electric cars. We'll cross-reference well-developed cities in New Jersey to underserved areas with regards to the city condition, citizens, environmental state and affordability. The research will consist of qualitative case studies. Data showed that citizens face heightened barriers and greater challenges to adopting electric cars, including cost and practicality. Lowering these barriers to electric mobility will increase the share of prospective consumers.

Ivander Samano-Bacani, Edwin Gomez, Sandra Orejarena, Taylor Tucker, Patricia Gonzalez
Faculty Advisor: Min-Chung Han

"Bringing Awareness to People for Animals"

People for Animals is a nonprofit organization whose mission is to prevent animal suffering through essential health care advocacy. Although this organization's intentions are outstanding, their current marketing strategy can certainly be improved. This research is intended to discover what moves individuals to adopt animals in need and donate to this nonprofit organization. With the use of surveys and questionnaires, we aim to answer the question of how much awareness and animal donations can be increased through a wider social media presence and promotion.

Julie Santner
Faculty Advisor: Ipek Kocoglu

"Do Systems of Government Impact the Hazardousness of Fast Fashion?"

While research predominantly focuses on the impact of the fast-fashion industry, the mechanisms that translate its effects on environmental, social and ethical hazards are largely ignored in the current scholarship. This research seeks to study sociopolitical values in order to understand the context-dependent effects of fast-fashion. We seek to explore the connection between the sociopolitical values that manifest in socialist, communist, and democratic nations and the hazards of fast-fashion. We argue that governmental systems when interacting with capitalism in the garment industry will change their ideologies and corrupt the social contract between the government and its citizens. In fact, capitalism is an economic force closely tied to politics, sometimes to the detriment of political ideologies, in order to equate profit as the driving force of any successful government. Thus, governmental systems leverage the hazards of fast-fashion on environmental, social and ethical governance performance of countries.

Tina Marie Santocildes, Antonio Culic, Alexander Valdes, Alex Calderon, Nicholas Kovach, Bryan Padolina
Faculty Advisor: Ipek Kocoglu

"How Do Female Executives Impact Firm Growth?"

Would it come to your surprise that despite the growing emphasis on decreasing the gender gap, only 6 percent of CEOs are women? This study will focus on gender diversity in organizations and how it impacts company performance. Data will be gathered from research articles that focus on the role of female executives' impact on leveraging firm success. In particular, this study will help to see if companies with female CEOs have a higher company growth. Driven by our results, we will discuss if the gender bias in the top management has a correlation with actual leadership skills or if it is just a manifestation of gender stereotypes imposed on female leaders. This research helps contribute to the management discipline by offering insights into how gender is perceived in leadership positions and the unique performance outcomes garnered through successful female leaders.

Alex Savage, Ameenah Danmole, Shaliya Bagwell, Kirtan Patel, Jarrod Hall
Faculty Advisor: Min-Chung Han

"Integrating a Digital Media Marketing Strategy to Improve the Awareness of The Arc of Union County"

All over New Jersey there are kids with disabilities, but there aren't organizations like the Arc to get them the care they need. The Arc of Union County is a nonprofit organizations (NPO) that lacks the funds to advertise for donations and volunteers. As marketers, we are tasked with helping a business get its name out there, and there is no better one than The Arc of Union County. Since our target audience will be parents of disabled children, we will use social media like Facebook and Twitter to raise awareness. Through this journey, we will achieve our goal of at least 50 more visitors to be aware of this NPO as well as have a few visitors see the facility and what kind of help they have to offer the children.

Alex Savage, William Krzewick, Victor Chen, Jonah Toma, Brandon Harrison
Faculty Advisor: Valerie Vaccaro

"A Marketing Communications Analysis of the Men's Grooming Products Industry"

According to IMARC, the global men's grooming products market is forecasted to reach U.S.$ 81.2 billion by 2024. Men's grooming habits are evolving beyond traditional products (e.g., shaving creams, shampoos, colognes, deodorants) to skin-care and anti-aging products that focus on personal wellness and appearance. We will review secondary research on relevant industry trends. Our team will conduct an analysis of men's grooming product companies in regards to marketing communications and marketing strategies (e.g., digital marketing, social media, direct marketing, public relations, sales promotion, products, pricing, partnerships, etc.). Our goal is to develop a marketing communications plan for potential expansion into a men's product line for Thrive Causemetics. Thrive Causemetics' mission could expand so that every purchase can improve the lives of people, animals, and communities around the world.

Alex Savage, Nicole Martinez, Steven Le, Jing He, Yunjia Qu
Faculty Advisor: Min-Chung Han

"Market Analysis of the Efficacy of Integrating Watsons Pharmaceutical Products in the U.S. Market"

Watsons, an Asian pharmaceutical company based in Hong Kong, operates successfully as Asia's number one pharmacy network. Is this company capable of thriving in a U.S.-based market? The research will analyze whether a company like Watsons can thrive in a region contrastive from its home market. By analyzing the competitors' political, economic, sociocultural and technological components as well as the consumer behavior between both U.S. and Asian consumers, we composed an omni-channel-style marketing campaign as a feasible option for Watsons executives to excogitate and actualize into the U.S. market. Constituents of our marketing campaign entail a SWOT analysis of the intended market, a positioning strategy, ads, and tech marketing efforts.

Nadia Sherman, Ulysses Green, Elena Khakimova, Daniela Piperno
Faculty Advisor: Min-Chung Han

"Increasing Online Presence of OASIS — A Haven for Women and Children — Through Social Media"

OASIS has a goal of bettering the lives of women and children by providing various services including but not limited to educational and social services. Our purpose is to assist OASIS with its goal of maximizing funding by increasing their overall social media presence, therefore involving more donors and volunteers. We will achieve this by examining the social media analytics of other nonprofit organizations and involving the local community through digital marketing strategies.

Deepinder Singh, Damjan Agaj
Faculty Advisor: Ipek Kocoglu

"Streaming College Games: ACS - All College Sports"

About 300,000 student athletes compete in Division 2 and 3 of the National College Athletic Association (NCAA). When compared to the average 15,000 fans attending each of the Big Four leagues (MLB, NBA, NFL, and NHL), a higher number of family and friend supporters are looking to watch the D2 and D3 college games. However, there is no reliable and convenient way to watch college sports and track the statistics of the players. Driven by our research, we identified that ESPN offers streaming of the games played in pro leagues through a mobile application that has 12,000 new subscribers every month. In this study we aim to develop a mobile app that offers streaming services for the D2 and D3 college games and aim to market this pioneering idea to reach 2,000 new subscribers per month. Our business will create a new platform that connects student athletes with their families and friends and share their memorable moments.

Angela Smith, Ashley Hunt, Andrew Ray, Alejandra Ortiz
Faculty Advisor: Janine Black

"The Hidden Consequences of Electric Vehicles"

Most people are aware of the positive effects of switching to electric vehicles from gas powered, though many do not realize the pollution that is emitted from electricity-powered cars. Switching to electric vehicles can cause long-term negative effects to the environment and our pockets globally. These negative effects include the use of electricity plants, cost of electricity, the specific lightweight metals that are used, and the car battery's release of carbon dioxide. The manufacturing of an electric battery is costly and damaging to our environment, using rare earth metals at a fast rate. In addition, there are many countries that do not have enough money to have access to that kind of technology. Countries like India have to change their infrastructure in order to find the next generation of transportation solutions.

RahSaan Sullivan, Doug Williams, Jacob De Sousa, Xavier Maldonado, Bryan Blandon
Faculty Advisor: Ipek Kocoglu

"Fast and Furious Growth Rate in Sectors of Highest-Grossing Firms"

Studying the fastest-growing firms and their sectors can reveal a lot of insights about the business trends of today and tomorrow. Most of the past research has been focusing on understanding the short-term changes in sectors; however, few studies focused on analyzing the long-term sectoral trends of highest-grossing firms. Although many studies have been done in the past with specific data on these companies, they mostly missed out on crucial information such as correlational graphs comparing multiple companies at once, whether it's comparing revenue, net income, annual growth or market value. In this study, we will investigate the long-term sectoral growth trends to better anticipate which sectors drive the economic advancement. Our findings will show which sectors and firms should be expected to grow in the near future, in addition to which companies in these sectors have already reached the top 10 list in regards to their revenues, profits and stock returns.

Matthew Tanis, Jon Duffy, Justin Regester, Mohammad Mehdi
Faculty Advisor: Min-Chung Han

"NJ GAP Nonprofit Digital Marketing Strategies"

Homeless dogs struggle every day to find food and shelter; NJ GAP helps to provide these dogs with a safe living environment. No dog deserves to struggle through everyday living; through NJ GAP, dogs are provided with food and shelter and given a safe home. Many of us have loving dogs at home, and we think that every dog deserves the same opportunity. By donating through our GoFundMe link, you can help raise money to purchase better medical supplies, food, and shelter for each and every dog. To help raise awareness through social media and increase website traffic while improving digital media marketing strategies. Through our marketing strategies we hope to increase the number of dogs put into homes.

Jemychelle Todorovich, Jose Deleg, Kara Kitchen, Josie Pagano
Faculty Advisor: Ipek Kocoglu

"Vision and Charisma: Do Female CEOs have Different Leadership Styles than Male CEOs?"

Leadership style is considered an important leverage for high performance in firms. Research on leadership styles has mainly focused on the potential impact of different leadership styles on firm performance. However, a major question remains unanswered: Does the leadership style of female CEOs impact firm performance differently than the leadership style of male CEOs? Using data from Fortune 100 CEOs, we assessed the different leadership styles and compared the leadership styles of 8 female CEOs with a matched sample of eight male CEOs. Using a qualitative analysis we were able to narrow down the different impact of female and male leaders' charismatic and visionary leadership styles on the way the company is run and operated.

Yvonne Toriz, Patricia Gonzalez, Dhvani Patel
Faculty Advisor: Byeonghwa Park

"Comparative Analysis of E-Procurement Software by Organization Size"

The purpose of this research is to compare three e-procurement software and conclude whether they are effective methods of supply optimization in different sized organizations. Electronic procurement (EP) is frequently defined as the sourcing of goods or services via electronic means, usually through the internet. The needs of the organization's procurement process will be matched with the benefits offered by researching available software. This research will expose how e-procurement software adds value to an organization at a minimal cost. It is believed that e-procurement software helps streamline the purchasing process, which tightens the control in costs and materials. In turn, this research can help organizations increase profit margins.

Andrew Vargas, Edward Diaz, Cheng Jiang, Zixuan Jin
Faculty Advisor: Min-Chung Han

"Watsons' Market Viability in the Cutthroat Pharmaceutical Retailers of America"

Watsons, is Asia's largest health care and beauty chain, but just how profitable would it be by entering the American market as a sole franchise while facing off against well established chains like CVS, Rite Aid and Walgreens? This project will conduct a mock marketing campaign in order to determine its viability. Our study will include a look into the usage of online retailing, social media, and paid media strategies, as well as market segmentation, PEST analysis and the four P's of marketing. We will review all of these avenues in order to deliver a comprehensive report on whether or not the business will thrive.

Andrew Vargas, Andrew Hopper, Maria Solano de la Sala Torres, Gianni Edwards
Faculty Advisor: Thomas Abraham

"A Case Study of H&M and Its Sustainable Practices"

H&M, Hennes and Mauritz AB, is a Swedish clothing and home company that has expanded globally with intentions to further demonstrate sustainable business practices all while continuing to satisfy their customers. Our hypothesis is that H&M's sustainable practices and its attention to the Triple Bottom Line (TBL) has made the company both more innovative and more productive. Our group will be using the case study research method to test our hypothesis. Our data will be acquired through secondary sources including annual company reports, shadow reports, company sustainability reports, and media reports. The data will then be analyzed using business strategy concepts, such as the Global Reporting Initiative (GRI) guidelines and shared value.

Andrew Vargas, Samantha Noelcin, Giulianna Viera
Faculty Advisor: Kihwan Kim

"Are You Ready to Interview with AI (Artificial Intelligence) Robot?"

The impact of AI on human resource management is substantial. A survey indicates that 15 percent of Fortune 500 companies are using AI when they source, screen out, and interview new job candidates. CEOs and HR managers consider the expansion of AI use in the hiring process. The interview with AI provides job candidates with a very different experience from the regular face-to-face interview. Up to now, few studies have been done on the impact of AI on HRM areas, and, in particular, the AI interview. The current project aims to explore the attitudes and satisfaction of job candidates about AI interviews and the traits and competencies that might lead to a successful interview performance with the AI interview.

Andrew Vargas, Giulianna Viera, Samantha Noelcin
Faculty Advisor: Kihwan Kim

"Are You a Powerful Leader? How Can You Know That?: Development of Leader Power Source Scale"

Leadership is a process that influences others to achieve common goals. The leadership literature identified several power sources of the leader, such as legitimate, referent, reward, coercive, expert, moral, and visionary power sources. It is discussed that a successful leader has certain power sources to lead its followers effectively. However, there have been few studies to empirically test the relationship between leader effectiveness and the leader power sources. One reason for the lack of empirical study is that there is no sound measure of the power sources of the leader. Our project aims to develop a leader power scale based on leadership literature. The measure will be extensively used for leadership research.

Chanel Wells, Samir Rasheed
Faculty Advisor: Ipek Kocoglu

"Offering Easy Cleaning to College Students: Rasheed Wells Cleaning Service and Company"

After a long day of school and work, you walk into your dorm and it is filthy — and you still must study before your exam. They have only one motive: save time and energy. Driven by our market research, we came to the conclusion that students would rather pay to have someone clean up after them rather than actually saving their money and doing it themselves. In this project, we are developing a novel mobile application to offer an easy easy-to-use platform for college students that will allow them to get cleaning services targeted for various purposes. Rasheed Wells will be offering one type of service that is extensive cleaning. While we work with customers through the season and semester, we will offer move-in services along with laundry from the beginning until the end of the semester. This project will present the detailed business plan including the market, the competition, and the financial analysis to launch our new platform of cleaning services.

Hao Weng, Biqi Zhou, Danwei Yang
Faculty Advisor: Min-Chung Han

"Insights in Singapore Market: Focused on Cultural Impact on Business Environment"

This research aims to provide an in-depth analysis of the Singaporean market to understand its cultural differences and business environment. This study explains general Singaporean market characteristics in political, economic, social, and technological aspects. Singapore's robust economics provided affluent promising market opportunities for companies from other countries. Singapore has high economic freedom in laws, government, and regulatory efficiency. Therefore, Singapore provides a business environment that is free and full of opportunities. Considering the significant challenges of cultural difference, this paper also provides strategies for raising brand awareness and building a local network in Singapore.

Lisa Wit, Andrew Germinario
Faculty Advisor: Ipek Kocoglu

"A Creative Way to Support Work-Family Balance: NailTech"

Women are increasingly working in higher-earning, more demanding jobs with more responsibilities of taking care of the family and the household. It leads to time and strain-based conflict between work and family life that results in women sacrificing from the time and money they spend in their personal care. In this project, we create a simple nail care experience that promises to solve women's time- and strain-based conflict in work-family life. We are developing a new product, NailTech, by creating a fast, cost-efficient way of getting your nails done. It is a 3D printer, which creates customized nails and offers a variety of color options as well as an array of various shapes to choose from. This product will eliminate the hassle of scheduling an appointment and cut back on spending. We aim to point attention to simple solutions that can support women in their career and personal lives.

Alexis Worlds
Faculty Advisor: Paul Croft

"The Learning Commons — Marketing for Awareness to Improve Satisfaction and Access"

This project was designed to apply marketing and communication skill sets to the advertisement of Student Support Services in the Learning Commons and to provide an understanding of user awareness, access and satisfaction. This included an examination of the services (e.g., writing, public speaking, tutoring) and collections available (e.g., books, ebooks, reading reserve) from the Learning Commons to the Kean Community. The intent was to take the initial steps of implementation of a marketing strategy and campaign for the Spring 2020 semester with regard to resources and expectations.

Justin Wutzer, Brittanie Bravo, Tom Riccardi, Jaret Tutzer, Connor Mees
Faculty Advisor: Janine Black

"Charging Underserved Communities: Determining the Appropriate Pricing Strategy"

This research project explores the most appropriate pricing strategy to successfully introduce electric scooters in underserved communities, specifically in New Jersey. Diligent analysis of the demographics provides insight on the target market. Furthermore, this research project will address the economic viability of electric scooters in underserved communities. A reasonable pricing strategy determined by comparatively evaluating both household income and electric scooter costs will help establish the ideal pricing strategy. Extending the opportunity to access electric scooters in underserved communities can be executed through rentals, reimbursements, and tax incentives.

Danwei Yang, Syed Nadeem, Kevin Tapia
Faculty Advisor: Min-Chung Han

"Assessment of Kean University Students' Financial Literacy"

This study aims to investigate Kean University students' financial literacy and to find whether there are socioeconomic gaps in their literacy. This research surveyed 68 Kean students to measure their financial literacy and their self-assessed literacy. Although 91.2 percent of Kean students put themselves higher than average financial literacy, the result shows that Kean students have lower than national average financial literacy, which is deemed as inadequate financial literacy. The result shows that there is no big difference in students' socioeconomic status on their financial literacy. Surprisingly, most respondents take financial advice from their personal connections, such as family and friends, rather than financial experts.

Research supported by: Foundation Faculty Research Award, Kean University Foundation, Research Recruits program, Kean University

Kexing Zhou, Xinyun Xu
Faculty Advisor: Sut Sakchutchawan

"Corporate Social Responsibility of Taobao to Consumers"

When the trading shifts from offline to online, the issue of products and consumer protection becomes more crucial. This paper explores Taobao websites to demonstrate what e-commerce sites have to do to be reliable. Taobao applies the Seven Day Return policy to comfort consumers when they receive fake or low-quality products. Relying on the policy, many consumers are willing to try to purchase products since they have nothing to lose. The only way to gain confidence from consumers is to ensure the quality of products, rather than to compensate consumers based on the Seven Day Return policy. Taobao cannot punish sellers who sell counterfeit products directly, but they are able to refer those sellers to law enforcement for legal actions.

COLLEGE OF EDUCATION

CURRICULUM AND TEACHING

Esleydy Cabada

Faculty Advisor: Heather See

"Barriers for Children Learning a Second Language"

The purpose of the study is to understand what barriers exist for children learning a second language. This research was motivated by the overarching question of: What are the barriers for children learning a second language? This is followed by three sub-questions: Why can't every child acquire a second language? In what year did teaching another language in the United States became popular? and What are the advantages and disadvantages of learning a second language? These questions will be addressed through qualitative interviews with parents of children from age 3-5 with diverse backgrounds who must have their child in a dual-language classroom. I hope that the results of the study highlight individuals' experiences in language learning.

Daniella Ingrassia

Faculty Advisor: Heather See

"Decrease in Writing Instruction in Elementary Grade Levels"

Elementary Education educators provide instruction on the abilities that are fundamental, not only in their academic career, but for everyday encounters throughout life. This research discusses the inconsistencies in writing instruction for elementary grade level students. It aims to study whether there are strategies that can be implemented to further a consistent writing instruction that will enhance the students' understanding of the writing process and basic understanding of key concepts. The researcher uses qualitative measures to disclose teachers' input on strategies that can enrich the students' knowledge.

Chadia Knight

Faculty Advisor: Louis Beaugris

"Effects of Teaching Methods Used at the Elementary Level to Teach Mathematics"

This research investigates the effects of teaching methods on the perceived mathematical capability of elementary school students. According to several studies, students from other parts of the world, such as China and Singapore, tend to demonstrate better performance in mathematics than those from United States. In fact, for years, elementary school learners in the United States have been continuously showing poor performances in global mathematical exams. The present research aimed to study the quality of teaching methods used in the United States and their impact on student performance in mathematics at the elementary school level.

Zorel Morales

Faculty Advisor: Eunice Nkansah

"Supplemental Learning: How Supplemental Learning Impacts the Academic Performance of College Students"

Tutoring programs and Supplemental Learning Strategies have become an integral part of America's colleges and universities (Dvorak, 2004). The introduction of Supplemental Learning in higher education is thus approached with distinct strategies established to provide students with the best academic experience. The objective of this study was to analyze the benefits of Supplemental Learning and how it impacts the academic performance of students. The researcher applied a mixed method approach by conducting online surveys and interviews. Results of the study showed a higher proportion of college students who agreed that Supplemental Learning support in schools was very beneficial to students. Though results were in support of the researcher's hypothesis, the study highly recommends improvement in Supplemental Learning services (tutoring) to effectively assist students.

AnnaMarie Quagliato

Faculty Advisor: Heather See

"Stakeholder Perspectives of Looping in Early Childhood Education"

This study examined the perspectives of stakeholders, such as parents, teachers, staff, and administrators, on looping in early childhood education. It will also contribute to a greater understanding of the strengths and weaknesses of a looping program within early childhood education. The participants had various exposures to looping and shared their perceptions through an electronic survey. In-person and phone interviews were conducted with those seeking to elaborate on their survey answers, sharing further insights. An evaluation of the results will provide information on how relative perspectives on looping form views and perceptions, which may have the potential to influence decisions on future early childhood education programs and policies.

Joseph Veliakath

Faculty Advisor: Brian Baldwin

"Student Achievement and District Factor Groups"

This research focuses on data collection and analysis of statewide NJ Department of Education student achievement data on math and science tests administered yearly in New Jersey to students in public schools. Previous research conducted by our group has looked at different District Factor Groups (DFG) and relationships between DFG as well as factors such as ethnicity, gender, ELL and economic disadvantage. This research will continue to investigate these relationships by incorporating results from 2019, which were not investigated through prior research. Additionally, closer looks at school districts that vary more substantially than the predictive results from their DFG will be investigated for specific initiatives or other factors that might contribute to the achievement scores.

HEALTH AND HUMAN PERFORMANCE

Belki Aguirre, Nicole Stiles
Faculty Advisor: Norma Bowe

"Be the Change NJ Dream Big: Young Women's Leadership Initiative"

The Dream Big Program is a young women's leadership initiative developed and implemented by Be the Change NJ. The Dream Big Program will target young women ages 10-15 receiving services at the Elizabeth Coalition to House the Homeless in Elizabeth, NJ. A 12-week educational program will consist of didactic group discussion and field trips geared toward building self-esteem, self-efficacy and positive health outcomes. The main objectives of this program are to increase personal development; to learn leadership and teamwork skills, goal setting, and positive educational outcomes, to increase community engagement; and to decrease risk factors associated with homelessness. Pre- and posttests show a significant increase in all variables.

Karina Alves
Faculty Advisor: Nicole Matuseski-Lowy

"Tenex Procedure for Patella Tendinosis on a Men's Basketball Player"

Although promising results for patella tendinosis was presented, it is hard to prevent the symptoms from reproducing, especially when an athlete is out of season. This shows that though a noninvasive alternative such as the Tenex procedure may have immediate positive results after procedure, it does not mean it will permanently prevent tendinosis from reoccurring.

Beth Anania
Faculty Advisor: Nicole Matuseski-Lowy

"The Effects of Antibiotics in a Preseason Soccer Athlete"

The use of antibiotics during physical activity hinders an athlete's ability to perform to their usual level of play. When you combine the effects of antibiotics and an athlete who is already under stress, the likelihood of problems arising are higher than normal. Antibiotics such as Levaquin recommend a sufficient amount of liquids and proper nutrition to prevent highly concentrated urine. Athletes neglect to realize that taking medicine can drastically alter how their body functions, making those incidents where their bodies are pushed to the limit more threatening.

Alyssa Antoine, Jennifer Fernandez
Faculty Advisor: Omara Cardoza, Consuelo Bonillas

"Year One Results of Implementing Teen Pregnancy Prevention Programs in New Jersey Schools"

This research study evaluated the effectiveness of two programs that the New Jersey Department of Health funds. The two programs that are funded are the New Jersey Personal Responsibility Education Program (NJPREP) and the Sexual Risk Avoidance Education Program (SRAE). These programs implement two curricula, are both evidence-based, and are designed to decrease adolescent pregnancy and sexually transmitted infections in New Jersey's identified high-risk municipalities. This study was conducted in a total of five sites. A cohort of 127 7th-10th grade students participated. Participants completed baseline surveys, post surveys, and focus groups. Emotional Management and Self-Efficacy were found to be statistically significant at the $p \leq .05$ level.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780, New Jersey Department of Health, Personal Responsibility Education Program DFHS19PRP004

Austin Arndt, Sarah Sample
Faculty Advisor: Nicole Matuseski-Lowy

"NEMO Deficiency Syndrome in a Female Collegiate Volleyball Player"

Nuclear factor-kappa B Essential Modulator (NEMO) deficiency is an autoimmune genetic defect that causes infections, skin conditions and a weakened immune system. Even though a patient can participate in athletics with this condition, it is important to be aware of potential exposure that can worsen an infection.

Emily T. Badalis
Faculty Advisor: Kyoung Tae Kim

"What Motivates Individuals with Disabilities to Participate in Adaptive Sports?"

Adaptive sports refers simply to "sports for people with disabilities." While there is a growing interest and body of knowledge about adaptive sports, little has been conducted about motivation for adaptive sports. The purpose of this study is to explore what motivates individuals with disabilities to partake in adaptive sports. To understand why people with disabilities participate in adaptive sports, in-depth interviewing will be used. Each interview will be audio-recorded. Participants will be recruited from local adaptive sports clubs and teams. Overall, this study will create opportunities to better understand individuals with disabilities and will affect adaptive sports as a whole.

Adrienne Bagtas
Faculty Advisor: Kyoung Tae Kim

"The Effects of Aquatic Therapy on Pain and Fatigue in Adults with Multiple Sclerosis"

Individuals with disabilities are less likely to participate in daily moderate activity than people without disabilities, yet they have similar needs to improve their overall well-being and prevent unnecessary illness. The purpose of this study is to determine the effects of aquatic therapy on pain and fatigue in adults with multiple sclerosis (MS). Research in regards to the effects of aquatic therapy on MS is limited. In comparison to land-based exercises, aquatic therapy offers an ideal medium in which MS patients can exercise, while simultaneously providing immediate and gradual cooling of the body surface. Through different research studies, it can be determined if aquatic therapy is shown to be a beneficial treatment.

James G. Beaty III

Faculty Advisor: Walter Andzel

"Motor Control Screen as a Predictor of Athletic Performance in Division III Collegiate Athletes"

The purpose of the study was to investigate the relationship between the motor control screen (MCS) and athletic performance in Division III collegiate athletes. Nineteen participants from Division III collegiate sports were used in the study. The protocols within the MCS to measure motor control were the forward reach test (FR) and upper body reach test (UBR). Four athletic performance tests were used in this study: countermovement jump, medicine overhead toss, 40-yard dash, and T-test agility run. The statistical analysis revealed that scores of MCS and scores of performance tests did not show significant correlations. The study concluded that MCS is not a predictor of athletic performance, but is a reliable source for clinical practice.

Sarat Y. Busari, Belki Aguirre, Ana Gymrek

Faculty Advisor: Norma Bowe

"Be the Change Leadership Initiative Recovery High School"

It is estimated that approximately 1.5 million teenagers meet the criteria for a substance abuse disorder. Of those adolescents, only 7 percent receive treatment. Adolescent brain research shows that the prefrontal cortex is underdeveloped. This leads to impulsivity and difficulty in goal setting, reasoning, and judgement. University of Michigan survey data (2015) indicate that adolescent substance abuse rates are at the highest in this country in 30 years. In addition, nearly two thirds of high school seniors and one third of eighth graders have used alcohol in the last month. A 12-week mentoring/ educational program will consist of didactic group discussion and field trip experiences geared toward building self-esteem and self-efficacy.

Kerline Calixte

Faculty Advisor: Kyoung Tae Kim

"The Effect of Aquatic Therapy for Children with Autism Spectrum Disorder: Evidence-Based Practice"

Aquatic therapy is a rapidly expanding form of patient treatment that has seen positive results across the nation. The paper will review the literature on aquatic therapy for children with autism spectrum disorder and propose practical implications. To provide aquatic therapeutic services, one must possess and have knowledge of the theory of water techniques. The success of the program, however, will always depend on the outcomes and experiences provided by therapists and gained by the patients.

Noemi Castaneda

Faculty Advisor: Kyoung Tae Kim

"Does Horticultural Therapy Improve the Mood of Individuals with Dementia?"

The purpose of this paper is to acquire knowledge on how to form successful strategies concerning Horticulture Therapy (HT) on individuals with dementia in long-term-care (LTC) settings and more specifically, on the effects HT has on the mood of said individuals. The literature compiled focuses on major themes. Those themes include psychological benefits, effects of environment and forms of HT interventions. The results from the literature discuss the improvements to the individual's cognition and emotional health. The studies were brief as results were typically observed directly following interventions. A strategy developed in response to the literature is to provide a sustained routine HT program for residents of an LTC facility.

Racquel Chong

Faculty Advisor: Nicole Matuseski-Lowy

"Meniscal Tear From Hyperflexed Knee: Level 3 Case Study"

Typically, a hyperflexed mechanism would cause a tear of the posterior cruciate ligament in the knee. However, a combination of valgus force, hyperflexion and internal rotation can lead to tearing of the lateral meniscus. This explains why a detailed evaluation is necessary.

Khailah Cochran

Faculty Advisor: Kyoung Tae Kim

"Music-Based Therapy and Children with Autism Spectrum Disorder: An Evidence-based Practice Approach"

There is an array of studies done to support the theory that music has positive effects on the developmental skills of children with autism spectrum disorder. This paper will discuss music-based therapy and the positive effects it has on children with autism spectrum disorder. It will also include the definition of autism spectrum disorders, the potential causes of this disorder, some of the symptoms, how to diagnose it, prevention and the different treatments used to address this disorder. Then, the paper will propose a knowledge transition plan, which explains how this knowledge through literature synthesis can be applied to recreational therapy practice.

Haley Colacurcio, Belki Aguirre, Aniya Scott

Faculty Advisor: Norma Bowe

"Be the Change: Changing the Landscape for Peace, One Garden at a Time"

Newark is the largest city in New Jersey, with a population of 277,140 and with a considerably high crime rate compared to the nation's crime rate. After conducting a social epidemiology project, murder mapping all four Newark wards, garden projects were implemented in the high violent crime areas. Quantitative data has shown a decrease in violent crimes with the implementation of the community gardens. With "Be the Change," Kean University is actively engaged in peace efforts by "adopting" vacant lots in dangerous Newark, neighborhoods and turning them into "peace gardens." These efforts have been highly successful in "bringing unity to the community," and creating a dialog regarding peace and nonviolence. The gardens promote visual improvements to the neighborhood and empower residents to take back their streets and to understand the role that they can have in local issues.

Adam DeSapio, Dakota Wunsch, Sarah Wooby
Faculty Advisors: Kyoung Kim, Byeonghwa Park

"Examination of the Public Perception of the 2018 Pyeongchang Paralympics Using Sentiment Analysis"

The purpose of this study is to investigate the perceptions of disability before and after the 2018 Pyeongchang Winter Paralympic Games. Social media coverage of the Paralympics may reveal changes in the public perception of disability; these changes in mindset may be positive, negative or negligible. The study will further examine changes in content about disability, Paralympic athletes and the Paralympic Games. Social media provides a platform to easily share ideas with many people. There is insufficient research analyzing social media's perception of the Paralympics and Paralympic athletes.
Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

Samantha Drew
Faculty Advisor: Elizabeth Esposito

"Myositis Ossificans in the Quadriceps in High School Football: Level III Case Study"

With this injury, it is important to address the initial trauma to the area to prevent onset of ossification in the muscle. If ossification occurs, the athlete can experience decreased range of motion in the area and difficulty with activity, such as walking. If this injury goes untreated, the athlete would most likely have to pursue surgery to relieve the pressure off the muscle.

Michael Fidanza, Kevin Campbell, Peter Distefano
Faculty Advisor: Nicole Matuseski-Lowy

"Genu Varum Correction Surgery"

Genu varum is a condition that commonly leads to many other bodily issues if not corrected. Even though it is not a medical emergency, this condition should not be ignored as it can greatly affect the individual's biomechanics. The sooner this condition can be treated and fixed, the less of a possibility the patient will have with suffering from any secondary injuries.

Bethsabee Georges
Faculty Advisor: Kyoung Tae Kim

"The Effect of Yoga Therapy with Individuals with Spinal Cord Injury: Evidence-Based Practice"

Yoga is a practice or a group of physical, mental, spiritual, and emotional techniques that help improve an individual's quality of life. Yoga therapy is a way to strengthen and improve an individual's body functions such as strengthening muscle functions and functions of the nervous system and is used to reduce stress; stress causes many medical problems. The purpose of this evidence-based practice paper is to gather data on the effect of yoga therapy, as documented in the available literature, and hence propose an elaborate knowledge translation plan towards a change of practice.

Mary F. Glynos, Kelsey Sobieski, Daiyana Martinez, Sarah Yeldham, Solomon Watkins
Faculty Advisor: Norma Bowe

"Changing Trends in Breast Cancer Treatment"

Breast cancer treatment trends are changing. Breast cancer was considered a death sentence for women a decade ago. In New Jersey, the rate has declined 35 percent between 2000 and 2017 and currently stands at 20 per 100,000. Testing, chemo, radiation, and variations of surgery procedures are resulting in survival rates increases. According to the CDC, "Breast cancer is a disease in which cells in the breast grow out of control. The kind of breast cancer depends on which cells turn into cancer." This research focused on top hospitals in Union County and success rates among patients. We collected qualitative data comparing the types of treatments, the age of the patients, and the age they were diagnosed.

Gabrielle Gonzalez, Moises Azcona, Jayme Levine
Faculty Advisor: Nicole Matuseski-Lowy

"Cellulitis in Women's Soccer Preseason"

An athlete acquired contact dermatitis from adhesive spray used to help stabilize a previously injured ankle. The dermatitis rapidly progressed within 72 hours, and the athlete was soon diagnosed with cellulitis. Due to the intensity of the allergic reaction from the tuff skin spray, care must be carefully monitored and administered.

Guillermo Gonzalez
Faculty Advisor: Kyoung Tae Kim

"Developing an Aquatic Intervention for People with Dementia: An Evidence-based Practice"

Aquatics therapy is an intervention that has been around for many years, especially for those with physical disabilities. Dementia is a brain impairment disorder where memory loss happens, from long- to short-term memory being lost. There are many research studies done about how aquatics therapy can help enhance overall quality of life. This research helps provide evidence on how aquatics therapy interventions can be used to help diminish the enhancement of dementia in people and also enhance the quality of life. In additon, the steps on how to go about building an aquatics therapy program, including purpose and the expected outcomes of the intervention, will be addressed.

Nicole Guccione

Faculty Advisor: Nicole Matuseski-Lowy

"Gastrointestinal Condition Developed from Isotretinoin: Level 3 Case Study"

There is currently no definitive link between Crohn's disease or IBS and Isotretinoin use. Just like all other medications, it is critical to clearly disclose the side effects of the drug, especially if it may have the potential to cause any sort of gastrointestinal disease. If there has been a trend in gastrointestinal issues during or after the use of Isotretinoin, specific testing can be done prior to prescribing medication in order to prevent the onset of those symptoms. Recognition of any connection between Isotretinoin and potential gastrointestinal diseases is critical in determining which patients should be approved candidates for the medication.

Natalia Hernandez

Faculty Advisor: Kyoung Tae Kim

"Benefits of Virtual Reality for Clients with Cerebral Palsy: An Evidence-based Practice"

The targeted population included in this paper is adolescents with cerebral palsy. Although cerebral palsy (CP) has different levels of deficits, the benefits of virtual reality (VR) in some of those specific areas of needs from patients are identified and explained. CP, overall, affects an individual's muscle tone and could cause paralysis throughout the body. Paralysis is broken down based on how much of the body is paralyzed. VR is a universal software that an individual can use to experience sensory stimulation using specific equipment in order to interact in an artificial world.

James Keddy

Faculty Advisor: Nicole Matuseski-Lowy

"Vocal Cord Dysfunction in Women's Soccer"

The signs and symptoms that are presented with vocal cord dysfunction (VCD) should be recognized by medical personnel because it can disrupt a person's ability to exercise. There are differences between asthma and VCD that can help differentiate the two; if someone with VCD gets mistakenly treated for asthma, then they will not find any improvement. This can cause anxiety with the thought of not knowing what is wrong with them and why they are not getting better, which can further disrupt respiration through panic.

Stacey Kitt

Faculty Advisor: Norma Bowe

"Grandparents Raising Grandchildren"

Grandparents raising grandchildren is becoming increasingly popular. Research stated that about 2.7 million grandparents are raising their grandchildren for several reasons. Grandchildren's biological parents may be incarcerated, deceased, on drugs, or may neglect their responsibilities as a parent, so, some grandparents take on the role of a parent in their grandchildren's lives. This paper specifically highlights some problems grandparents faced, which includes grandparents' health, the education system, involvement of grandparents/educational concerns, financial constraints, housing, and support system.

John Koch

Faculty Advisor: Nicole Matuseski-Lowy

"Osler-Weber Rendu Syndrome: Level 3 Case Study"

Nosebleeds could occur anywhere and anytime, but some nosebleeds could be caused from genetic conditions that have existed since birth, such as Osler-Weber Rendu Syndrome. As an athletic trainer, you always have to be on the lookout for injuries, illness, and even preexisting conditions. That is why physicals are performed every year to find certain preexisting conditions of athletes. The athlete in the study has been diagnosed with Osler-Weber Rendu Syndrome and he continually gets nosebleeds as a result from it. Now that the athletic training staff knows about this, we will provide the best possible care for this athlete by controlling nosebleeds and doing other things.

Carly Lewandowski

Faculty Advisor: Nicole Matuseski-Lowy

"How Negative Psychological Effects Can Induce Asthma-Related Symptoms"

The athlete in our study faced the pressure of preseason and all the conditioning that it entails. This freshman athlete fell prone to asthma attacks and panic attacks throughout the few weeks of preseason while she was playing soccer. She was unaware of all the physical and mental tolls that she would take. Through the preseason, we used many different types of anxiety-calming techniques in order to calm her down. Dealing with these kinds of athletes are important because as athletic trainers, we have to help not only physical problems but mental problems as well.

Jonathan Loyola

Faculty Advisor: Nicole Matuseski-Lowy

"Anterior Ankle Impingement Secondary to an Inversion Ankle Sprain"

It is important to understand the mechanism of injury for bone spurs. A bone spur can often go unnoticed; however, if symptoms occur it could make the athlete's progress more difficult. Although this athlete's bone spur did not cause any increase in difficulty in his rehabilitation, it did cause the athlete to have more trouble regaining his ROM initially.

Brian Magurno

Faculty Advisor: Kim Spaccarotella

"Acute Effects of Exercise on Balance Confidence and Physical Functioning in Older Adults"

The purpose of this study is to research the effect of a single exercise session on older adults' (65 and older, n=19) balance perception and movement capabilities. With success in exercise completion and exercise fatigue, there is the possibility of an increase in fall risk following a single exercise bout for older adults. Balance and movement speed were tested at baseline and following a single bout of Tai Chi eight weeks later using the ABC Scale and TUG Test. There was no significant change in perceived balance. There was a significant decrease in post-exercise movement speed (0.77 ± 0.13 s, p=0.021). There was no difference found between genders or groups. The findings of this study indicate the safety of single bout exercise for older adults.

Dervain Mattos

Faculty Advisor: Adam Eckart

"Barriers to Physical Activity Among College Students Enrolled in Health-Related Courses"

The purpose of this study is to quantify the amount of physical activity in college students enrolled in health-related courses and identify common barriers to physical activity in this population. Students will complete the CDC's Barriers to Physical Activity Quiz and the WHO's Global Physical Activity Questionnaire.

Kerry McMenamin

Faculty Advisor: Lydia Kaplan

"Photography as a Therapeutic Resource"

While phototherapy benefits the general population, this type of therapeutic modality is especially effective for those with addiction and chemical dependency, depression, post-traumatic stress disorder (PTSD) and other trauma disorders, and chronic pain, as well as the grieving. The use of digital photography can be considered a new art because of its use of technology. While technology itself further enhances a client's therapy, new arts on their own allow clients to feel less pressure about their artistic and drawing abilities. An online multiple-choice survey was used, and participants were found through the use of social media, email and text messaging. Through the survey, it was concluded that phototherapy is not a common relaxing activity.

Alba Milla

Faculty Advisor: Kyoung Tae Kim

"Music Therapy for Children with Visual Impairments: An Evidence-Based Practice Approach"

Music therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program (American Music Therapy Association, 2019). The purpose of this study is to review the literature on the effect of music therapy for children with visual impairments in order to improve bonding, happiness, and social interaction. This paper will also discuss how the data revealed in the literature can be applied to recreational therapy practice. In conclusion, music therapy for children with visual impairment will provide empowerment for those who may not have sight, but have a clear vision of life.

Gregory Morel

Faculty Advisor: Nicole Matuseski-Lowy

"Os Acetabuli with a Labral Tear and Femoroacetabular Impingement"

Os acetabuli is a rare injury that could easily be misdiagnosed. Football is a strong contact sport that could bring a large amount of stress to bones, joints, and other structures. Many injuries could appear in the hip, so it is important to recommend further evaluation and imaging especially if symptoms and ROM do not subside.

Chukwudi Mozie

Faculty Advisor: Nicole Matuseski-Lowy

"Third-Degree Sunburn in Football: Level 3 Case Study"

Sunburn in any degree is preventable. Being able to recognize anyone who is out in the sun too long or possibly exhibiting any of the symptoms related to a burn, can be the reason that someone avoids getting a third-degree burn, which can be fatal. The athlete in the study being referred to the hospital prevented his condition from exacerbating. Teens and young adults need to be closely monitored to prevent sunburn.

Suzie Nicolas, Elissa Morera, Julie Evra

Faculty Advisor: Claudia Knezek

"Impact of Community-based Education Internships on Addressing Pedestrian Safety in High-Risk Areas"

Current research studies have identified the need for community and public health practices to be improved through better alignment of public practices, applied research and policies. Public health intervention methods and research practices have been successfully used to prepare college interns for fieldwork. Effective internships are important, since they provide trainees with a working knowledge of the public health system of interventions. Furthermore, the public health intervention model aligns trainees with members of the public health organization, through established communications, quality mentorships, and acquisition of health intervention skills based on collaborative research.

Research supported by: Traffic Safety Program, NJ Division of Highway Traffic Safety

Nikolas Palaia

Faculty Advisor: Nicole Matuseski-Lowy

"Forearm Reconstruction Surgery in a Football Player: Level 3 Case Series"

A 17-year-old male encountered wrist lacerations after punching his right fist through a window. Immediate repair of arteries, nerves, and tendons, followed by extensive rehabilitation, resulted in a good functional outcome.

Hailey Perez

Faculty Advisor: Nicole Matuseski-Lowy

"Heat Cramps Induced by Diet: Level III Case Study"

A male collegiate soccer player presented with muscle cramping in both lower extremities during preseason practice. The athlete's cramping shortly resolved. At the end of practice, he began cramping again in both lower extremities, abdominals, and his back. The athlete was cooled down with fluids and ice towels, and cramping resolved before he was transported back to the athletic training room. Upon arrival to the athletic training facility, the athlete was placed in the cold immersion tub with water and ice. Prior to preseason training, the athlete cut salt, sugar, and carbohydrates out of his diet to lose weight. This intense change of diet was a serious factor in the problems he faced during the preseason.

Aaya Rasheed

Faculty Advisor: Walter Andzel

"The Effects of the Slingshot on Push-Ups vs. an Unaided Condition"

The aim of this study was to determine whether the Slingshot may affect participants to execute more repetitions of the push-up exercise compared to an unaided condition. Studies indicate increasing work volume and efforts, such as repetitions, during exercise training may help to improve strength and to further optimize mechanical tension and metabolic stress leading to hypertrophy. Data has concluded, via sample t-test, a statistically significant difference in increased push-ups repetition performance with the Slingshot compared to without the Slingshot ($p < 0.05$). The slingshot, therefore, may heighten practice of lifting loads through an increased repetition.

Caroline Ratti, Jeffrey Montoya

Faculty Advisor: Edward Olsen

"Developing Cultural Competence in Elementary Physical Education: An International Perspective"

Cultural competence is the ability to understand and appreciate other parts of the world, religions, cultures, and points of view (United States Department of Education, 2018). Limited resources are available to develop students' cultural competence in elementary physical education settings. The purpose of this article is to introduce a collaborative online international exchange unit for physical education called CULTURE (Cultural Unit of Learning to Understand, Respect, and Empathize). The cultural unit occurred in the Fall of 2019 between an elementary school in New Jersey, US, and two elementary schools near Tokyo, Japan. The participants were fourth and fifth grade students from the U.S. (n=123) and Japan (n=56). According to the discussions and exit slips, students reflected positively on their learning experiences through the unit. The CULTURE framework may be a viable method in developing students' cultural competence in elementary physical education.

Keemazjia Rousseau

Faculty Advisor: Kyoung Tae Kim

"Benefits of Hippo-therapy for Children with Autism Spectrum Disorder (Evidence-Based Practice)"

Hippo-therapy is an intervention that uses horses to enhance an individual's overall quality of life. Hippo-therapy has positively impacted many people with different disorders and injuries such as autism, cerebral palsy, spinal cord injuries, head injuries, etc. I will be discussing the benefits of hippo-therapy for children who suffer from the neurological and developmental disorder known as autism spectrum disorder. Hippo-therapy allows individuals with autism to strengthen their motor functions, interactions with others, communication skills, sensory stimulation, and much more. Hippo-therapy has allowed individuals with autism to enhance their leisure interest and has benefited their treatment process in numerous ways.

Anisha Sharma, Mia Blundo

Faculty Advisor: Ipek Kocoglu

"Revolutionizing the Gym Industry: An Integrated Approach to Healthy Living"

According to the surveys, one of the most frequently observed challenges among health-conscious people is the need for a clean, safe, and well-maintained gym facility that offers a wide variety of equipment, knowledgeable trainers, and physically challenging classes. Further, the lack of healthy meal options that display the exact nutrients and processes that are used in the preparation of the meal is a critical concern. Our market research shows that customers are mostly engaged in fitness if they are able to integrate it into their lifestyle. In this project, our aim is to design a gym that integrates the fitness and healthy living needs of individuals, while solving the cleanliness and safety concerns of individuals.

Jason Simmons

Faculty Advisor: Walter Andzel

"Effect of One-Minute Rest Interval on Muscle Activation"

The purpose of this study was to investigate the effects of a one-minute rest interval on the neuromuscular activation of the pectoralis major and the lateral head of the triceps brachii when using 60 percent of one repetition maximum (1-RM) for the bench press exercise. During the first testing session, the 1-RM for the bench press of the participants was measured. The second session involved the testing protocol comprising five sets of eight repetitions using 60 percent of the 1-RM when incorporating a one-minute rest interval between sets. The results of the study suggest that a one-minute rest interval when performing the bench press at 60 percent 1-RM was not optimal in reducing fatigue and did not allow for consistent activation of the muscles being tested.

Noelle Deborah Sollivan

Faculty Advisor: Gwen Cleaves

"Vasovagal Syncope in a High School Football Player"

Vasovagal syncope occurs when the heart rate slows, and the blood vessels dilate in the legs. This allows blood to pool in the legs, which lowers the blood pressure. The combination of the drop in blood pressure and slowed heart rate quickly reduce blood flow to the brain, and syncope, or fainting, occurs. A high school athlete experienced symptoms of vasovagal syncope shortly after sustaining an ankle injury while participating in a football game. Through intervention by the athletic trainer, athletic training student, and team physician, the athlete's symptoms subsided after some time. The athlete did not have any other cardiac-related events throughout the rest of the season.

SPECIAL EDUCATION AND LITERACY

Kaitlyn Comerford

Faculty Advisor: Beverly Kling

"Teachers' Perspectives on Math Challenges and Strategies to Help Struggling Math Students"

The purpose of this study is to explore the challenges teachers in grades pre-kindergarten through 12th grade face with struggling math students. The individuals who were invited to participate in this study are graduate students at Kean University obtaining their master's degree in learning and behavioral disabilities, or post-master's certification as learning disability teacher consultants. Participants were invited to take a survey asking them to provide their perspective on math challenges and strategies to help struggling math students. The data collected through this study may provide teachers with a better understanding of the different challenges students have in math and strategies to help those challenges.

Meghan Cruise

Faculty Advisor: Beverly Kling

"The Impact of Mindfulness Techniques on Student Behavior and Math Achievement in Kindergarten"

Mindfulness is an ancient practice that has helped many people focus on the present moment. Focusing on the present moment is a skill that can help students in the classroom with both their behavioral performance and academic performance. The purpose of this study was to investigate the impacts of a mindfulness intervention in regards to behavior and math achievement. Students participated in guided meditations daily in the researcher's kindergarten classroom to improve their mindfulness skills. The researcher used a checklist to observe targeted behaviors and assessed their subtraction skills. The findings for this study suggest that improvements occurred with students' behaviors and math achievement in their kindergarten classroom.

Jessica Duran

Faculty Advisor: Beverly Kling

"Multi-sensory Teaching and Learning in Grades PreK – 12."

Multi-sensory approaches during instructional time have been beneficial for both the general and special education population. By stimulating various senses, it helps the learner to not only be exposed to the content in various ways, but it also helps to store the information in long-term memory. The purpose of this study was to find out teacher perspectives on using a multi-sensory approach in the classroom. The study will determine if teachers are using this approach, and if they feel that they have received proper training. A survey was administered to targeted graduate students in the special education master's programs at Kean University. Results may provide insight and strategies on the use of multi-sensory approaches in the classroom.

Tara-Lyn Farrell

Faculty Advisor: Janet Fike

"Teachers' Perspectives on the Co-Teaching Model in the Inclusion Middle School Classroom"

To meet the needs of students in classrooms today, districts are implementing co-teaching models. Studies have shown that teachers' attitudes towards co-teaching can influence their experiences. The purpose of this study was to determine the factors that are necessary for establishing successful co-teaching partnerships. General education and special education teachers were invited to participate in an online survey, consisting of 15 questions. The research is ongoing and outcomes will be presented on the poster. The researcher will create a spreadsheet in Google Sheets to organize the participants' responses. Results will be displayed using figures. Results can provide valuable information for administrators on ways to establish co-teaching partnerships.

Christina Feinstein

Faculty Advisor: Beverly Kling

"Teacher Perspectives on Co-Teaching Challenges and its Effectiveness in the Elementary Grades"

The importance of this study is to analyze teachers' perspectives on co-teaching and the inclusion classroom environment. The study, which was conducted, surveyed teachers on their perceptions of co-teaching, which co-teaching models they have used in their classroom, and the social and academic impact co-teaching may have on their students. Forty-two elementary school teachers and professionals in a public school in which the researcher was employed as a teacher were invited to participate in the online survey. Most of the participants stated that they understood their own roles within the classroom. Participants also stated that the roles of special and general education teachers were not clearly defined within the building.

Yansi J. Galvez

Faculty Advisor: Beverly Kling

"Teacher Perspectives on Preparation for Inclusion and its Barriers"

This study examined teacher perspectives on preparation for inclusion and the barriers that are faced in the inclusion classroom. "Nearly twice as many students with disabilities spent 80 percent or more of their school time in general education classrooms in 2011 (61.1 percent), as compared to students in that setting in 1989" (Vitelli, 2015). Research was gathered from a local elementary school to gain teacher perspectives on preparation for inclusion and the barriers they face. Fifteen teachers completed the online survey developed by the researcher. Results can be used by universities to fill in gaps in their teacher preparation programs. The study will also provide administrators with evident barriers in inclusion classrooms.

Paola Gavilanez

Faculty Advisor: Beverly Kling

"Teacher Perspective on the Effectiveness of Early Intervention Services and Language Development"

This study was conducted to gain insight into teachers' perspectives of early intervention and language development in preschool students with autism spectrum disorder. An online survey was completed by 25 preschool teachers who currently work in a public school in New Jersey. The survey asked teachers about their perspectives on the effectiveness of early intervention services, and whether teachers see language gains in students with autism spectrum disorder who attended these programs. Teachers were also asked to describe which strategies they used and found beneficial in their preschool classes to help language development in preschoolers with autism. The majority of the teachers found that students with autism who attended early intervention programs showed language gains in their preschool disabled classes.

Brooke Gilligan

Faculty Advisor: Beverly Kling

"Effect of teachers' Attitudes Towards the Inclusion of Students with Autism"

The purpose of this study was to examine general education teachers' attitudes towards the inclusion of students with autism spectrum disorder. Recent reforms in legislation have resulted in an increasing number of students with disabilities placed in the general education classroom. It is vital to consider teacher perspectives since perceptions can have an impact on the way students with disabilities are included and can enhance the educational experiences of students with autism. The study was conducted in a public school district in New Jersey. A 16-question survey was given to 24 general education teachers. Teachers' perceptions on this topic can lead to more staff training workshops to prepare for inclusion of students with autsm.

Julissa Guerra

Faculty Advisor: Beverly Kling

"Teacher Perspectives on Effective Strategies and Interventions for Teachers, Stress and Burnout"

Stress is so impactful that teachers need to find tools or strategies to help manage these feelings. According to Fernando (2013), the negative side effects of stress for teachers can be exhibited as decreased productivity and creativity, escalating to more serious symptoms like frequent anxiety, dissociation, frustration and, eventually, burnout (Fernando, 2013). This study gained perspectives from teachers through a survey administered, in order to determine the presence of teacher burnout, factors that influence teacher stress and burnout, and strategies that may have been used to address this. This study may drive district training on stress reduction and may motivate teachers to use training methods found to be effective to help them cope with teacher burnout.

Alyson Hairston-Beresford

Faculty Advisor: Janet Fike

"An Analysis of Teachers' Perceptions About Students in Foster Care and Special Education"

Research has demonstrated that students who live in foster care tend to have a higher rate of being determined eligible for special education and related services. Many of the children in foster care face excessive difficulties with social-emotional issues and behavioral and academic deficiencies due to the instability and confusion of being moved around in the system. This research surveys graduate students at Kean University who are teachers and analyzes their perceptions about students who have disabilities and are in foster care. It is anticipated that this research will provide insight on how educators can better serve this population of students. The research is ongoing and outcomes of the analysis will be presented on the poster.

Helene Kachersky

Faculty Advisor: Beverly Kling

"Teacher Perspectives on Student Anxiety in the Classroom and Strategies to Address These Issues"

Anxiety is one of the highest predominant childhood psychological disorders, affecting 25.1 percent of children between the ages of 13 and 18 years old. The purpose of this study is to survey teachers to determine their perspectives on anxiety in the classroom, characteristics they associate with anxiety disorders, strategies they use to address it in their classes, training they have received and services they seek for their students with anxiety. Teachers of all grade levels were invited to fill out a 14-question survey about various aspects of anxiety in the classroom. Results will help indicate what teachers know about anxiety and may provide them with additional anxiety-reducing strategies to widen their understanding of classroom anxiety.

Stephanie Lanzano

Faculty Advisor: Beverly Kling

"Teaching Strategies to Improve Academic and Behavioral Performance of Students with ADHD"

Many children in our schools have been diagnosed with attention deficit hyperactivity disorder (ADHD). This study is based on the strategies teachers find valuable and implement for students with ADHD. The research was obtained from classroom teachers in the graduate program in the Department of Special Education and Literacy at Kean University. A survey was designed and administered to obtain teachers' perspectives on various academic and behavioral strategies they use for students with ADHD. The information obtained from this study may help not only those students with ADHD, but the teachers educating them as well.

Jackqueline Macdonal

Faculty Advisor: Gail Verdi

"English Language Learners (ELLs) in College: Perceptions of Writing and Literacy"

How prepared are ELLs for academic writing within the university? Most undergraduate freshman come fully prepared to tackle courses jam-packed with term papers, take-home essay exams, and finals loaded with vocabulary and open-ended questions. However, if the results of undergraduate students' entrance exams indicate that their writing samples contain errors based on second language interference, they will be placed in remedial writing courses designated for ELLs, consequently, influencing both their ability to write and their attitudes towards themselves as writiers. This research study investigates ELLs' perceptions of their writing aptitude and literacy skills and how their writing proficiency impacts their academic success. Twenty-six student-writers that are non-native speakers of English were surveyed via an online tool "Qualtrics." Participants were current students at three major metropolitan institutions of higher education including Kean University. The results provided insights into the impact ELLs' experiences had on their ability to succeed academically as well as attitudes toward writing and literacy in general.

Patrick B. McShane

Faculty Advisor: Janet Fike

"Teachers' Perspectives on Academic Accommodations in High-Stakes Assessments for Students in High School"

The study performed was based on teachers' perspectives about accommodations for students with disabilities and whether they are a fair or unfair advantage in classrooms, as well as on state testing. The problem investigated was the gap between general education and special education students on state assessments, when accommodations are designed to equalize the results of both demographics. The importance to the field of education of this study is to determine which accommodations for students with disabilities are the most useful to implement in the classroom and in state testing from a teacher's perspective. A cross-sectional survey design was used to gather data. The research is ongoing, and outcomes will be presented on the poster.

Nicole Morris

Faculty Advisor: Beverly Kling

"Pediatric Bipolar Disorder in the Elementary Classroom: The Teachers' Perspective"

The purpose of this study is to determine teachers' knowledge of characteristics of pediatric bipolar disorder and other emotional/behavioral disorders, the amount of training teachers receive when a student with pediatric bipolar disorder is in their classroom, and what kind of strategies teachers have used when educating students with pediatric bipolar disorder. Another purpose of the study is to see where and what kind of services students with pediatric bipolar disorder and other emotional/behavioral disorders receive in the schools. Teachers were surveyed in a public school to determine their perspectives on this topic. Teachers can use the findings to look back on their own knowledge and classroom strategies when working with students with pediatric bipolar disorder. The survey results may serve as a momentum for the school to provide professional development to teachers on awareness of pediatric bipolar disorder, as well as other emotional/behavioral disorders that have been seen in their classroom.

Brianna Negron

Faculty Advisor: Janet Fike

"Teacher Evaluation Model Effectiveness and Reflection on Student Achievement"

Teacher evaluation models have been implemented into the education laws within districts across the nation. Teacher evaluation models are utilized to assess teacher practice, but recent research is stating that teacher efficacy is solely based on student test scores. Furthermore, teacher perceptions on the model frameworks have shown varied responses, which indicates that more research needs to be done. This research study seeks to understand the teacher perspectives of evaluation models that are used for educator observations. The participants of the study completed a paper-based survey. Results of this study may lead to more effective training programs for administrators and promote awareness of how teacher insight can strengthen the models.

Abigail Pendleton

Faculty Advisor: Beverly Kling

"Teacher Perspectives of Peer Mentoring as a Self-Monitoring Strategy for Students with Disabilities"

As inclusion classroom settings grow, students with behavioral, emotional, and learning disabilities face academic and social difficulties. Teacher training of strategies to help these students are limited. This study was designed to examine teachers' perspectives of peer mentoring as a self-monitoring skill. A survey was distributed to multiple graduate classes at Kean University. These surveys were analyzed and organized into data that reflects the training and knowledge of teachers. The use of peer mentoring as a self-monitoring strategy is a tool that would benefit both special and general education teachers. Understanding the extent of knowledge teachers have on this topic will help develop learning opportunities for them.

Diana Piedra

Faculty Advisor: Beverly Kling

"Teachers' Perspectives on Strategies and Techniques to Improve Social Skills in Students with Autism"

Children with autism are characterized for the lack of social interaction they have at home, school, and in the community. The purpose of this research is to learn more about teachers' perspectives of the social behaviors of students with autism. This study will determine whether teachers use model programs and home-school partnerships that help to develop and maintain social skills in individuals with autism. Through a survey, the researcher will examine whether teachers are using social skills strategies and if they find them helpful to improve social skills in their students with autism. This study will also help participants to reflect on model programs and home-school partnerships that help to develop social skills in individuals with autism.

Kenan Pierre

Faculty Advisor: Janet Fike

"Overrepresentation of African Americans in Special Education"

Research has demonstrated racial disproportionality in special education for decades throughout the country. Overrepresentation has been theorized to be due to school funding, socioeconomic status, and demographics, among other elements. These elements can lead to the overrepresentation of African American students in special education. This research will determine if overrepresentation occurs in New Jersey. This study used quantitative approaches to study the special education data collected from the State of New Jersey Department of Education's website. Such data includes the age, gender, and race of students classified as eligible for special education and related services in public schools across New Jersey.

Ashley Prata

Faculty Advisor: Beverly Kling

"Teacher Perspectives on their Ability to Recognize Gifted and Twice-Exceptional Students in their Classrooms and the Methods and Strategies They Use to Address Their Needs"

Twice-exceptional students are often underrepresented in gifted and talented programs/services. The identification of gifted and talented characteristics among students who have an identified exceptionality is often overlooked. The purpose of this study is to determine classroom teachers' knowledge of serving gifted and twice-exceptional students. In addition, the purpose of this study is to determine the methods and strategies used to meet the needs of students with these characteristics. The teachers surveyed in this study consisted of general and special education, fifth-grade teachers. The teachers were invited to fill out a survey exploring their perspectives and methods/strategies on serving gifted and twice-exceptional students. Survey results may serve as an impetus for the school to provide professional development to teachers on awareness of twice-exceptional students seen in their classrooms.

Victor Quesada

Faculty Advisor: Janet Fike

"Special Education Teachers' Perceptions of Mindfulness and Its Impact on Classroom Practice"

Students with disabilities can increase their ability to concentrate at school by implementing mindfulness interventions, such as meditation, yoga and breathing exercises. This study will determine which conditions are most likely to support teachers in implementing a mindfulness intervention in their classrooms. A survey will be conducted related to trait mindfulness, prior knowledge and awareness of mindfulness, and levels of support from administrators. The research is ongoing and results will be reported when the research is completed.

Jennifer Schneider

Faculty Advisor: Beverly Kling

"Perspectives of Grade 4-12 Teachers on Their Use of Strategies to Help Struggling Readers"

This study is designed to gain teachers' perspectives on how they support students who struggle with reading beyond 3rd grade. Only a small percentage of students receive special education services, yet many struggle with fundamental reading skills. Study participants are grade 4-12 general education teachers who are graduate students at Kean. This survey presents evidence-based reading strategies and asks teachers to identify those that they use and their training in these strategies. The results may show teachers' approaches to helping struggling readers, their training in this area, and their use of evidence based strategies. Results can help drive professional development training for teachers to help students gain reading proficiency.

Amanda Shelffo

Faculty Advisor: Janet Fike

"Effectiveness of Parent Training on Parents of Children with Autism Spectrum Disorder"

The rationale for this study is to better understand parents' perspectives about parent training targeted to their children with disabilities so that school districts may better implement training that is effective for children and productive for parents. This study anticipates that parents who have had parent training have more positive interactions with their children and that their children display fewer negative behaviors. Using surveys, the principal investigator will be able to determine those factors that facilitate effective parent training programs from the parents' perspective. This study is expected to be beneficial for administrators, teachers, and parents in creating a more positive home-school connection.

Lori Anne Travers

Faculty Advisor: Beverly Kling

"Teacher Perspective on Readers' Theater to Enhance Reading Comprehension and Fluency in Elementary Education Students"

Readers' Theater is an instructional method used to help improve reading fluency and comprehension in learners of all ages. The purpose of this study is to explore instructional strategies that promote reading enhancement through Readers' Theater. This qualitative study, using a survey, will examine what effective Readers' Theater looks like, and how teachers currently implement strategies in their classrooms for struggling readers. Understanding the teachers' perspective of what effective Readers' Theater looks like can help to develop the training necessary for teachers to help their students achieve successful fluency and comprehension skills to help them with critical thinking and other lifelong reading skills.

Jason Urbanski

Faculty Advisor: Beverly Kling

"Correctional Educator Perspectives on Student Motivators Using the Danielson Framework for Teaching"

Correctional educators can cultivate students' intrinsic motivation to increase academic achievement and completion rates by emphasizing motivators in the classroom environment. This study uses the model of the Danielson Framework for Teaching to measure educator perspectives on elements of the classroom environment (including teacher-student and peer interactions) and how meaningful they are in motivating incarcerated learners. Members from one national and one statewide correctional organization were invited to participate in an online survey. Sixty participants responded to questions about the classroom environment and student motivation. Results may benefit prison education by informing professional development and practices.

COLLEGE OF LIBERAL ARTS

COMMUNICATION, MEDIA AND JOURNALISM

Monika Bekhit

Faculty Advisor: Joshua Burnett

"How Being an Athlete at a Young Age Can Affect General Development Among College Athletes"

The importance of this research is to determine the ways involvement in athletics can later benefit one's general development. This research helps athletes analyze which factors to take into consideration as they transform into young adults. This research will also prove whether or not involvement in athletics is necessary in order to academically and socially thrive when growing older. This study examines how being an athlete at a young age can affect general development among college athletes. Kean University student-athletes were used as the sample by partaking in a survey that consisted of 19 multiple choice questions. Results showed that partaking in athletics at a young age can improve many aspects during development, such as communication skills, stress and anxiety levels, academic achievement, and mental health development. Many athletes had positive feedback on how athletics improved living habits in one way or another.

Noah Benjamin Dobson

Faculty Advisor: Scott McHugh

"How Monsters Have Changed in Cinema"

"How Monsters Have Changed in Cinema" discusses the development of monsters in their physical appearance and aesthics, as well as defines what and who a monster is in comparing films from the early part of cinema to the current decade. This research addresses how monsters changed from animals to people. Qualitative methods were used by observing and analyzing the monsters found in four films, *Dracula*, *The Creature from the Black Lagoon*, *Pan's Labyrinth*, and *The Shape of Water*. It was found that the changes occurred due to the media's information of who is conducting violence or are responsible for creating violence in the respective film.

Anne Caelle Jean

Faculty Advisor: Jeremiah Sullivan

"Is China Hip Enough for Americans?"

By analyzing soft power and cultural appeal of China through Chinese pop culture and film in an American audience, this research aims to uncover why China falls short in spreading Chinese culture globally through the outlet of film and pop culture. Furthermore, this research specifically aims to assess how media content aids the effective communication of culture. The research will also highlight the benefits of cultural transmission through film and pop culture, leading to why this is a concern for a growing global power like China. By analyzing prior research, we will discuss the many facets of this topic in full. Finally, it is important to identify the reason why Chinese pop culture fails to attract American audiences.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Tiffany Osoria, Abel Morais, Tamara Barbakova

Faculty Advisor: Raymond Lesniak, Sarah Mack

"The 2020 State of Advocacy in New Jersey"

The development of a nation's citizenry is linked to the organizations and institutions created to support national development. Collective political action by civil society organizations (CSOs), such as nonprofits, social businesses and voluntary associations, are an important means for inclusion of voices that otherwise might be silent in U.S. politics and policymaking. Determined to increase civic engagement and enhance advocacy, the Lesniak Institute focused on nonprofits to assess where the NJ community stands in terms of advocacy capacity. A comprehensive benchmark study of NJ-based CSOs was conducted to identify CSO readiness and capacity for advocacy based on the defined functions of advocacy.

Research supported by: Office of the Provost and Vice President for Research and Faculty, Kean University

ENGLISH STUDIES

Amanda A. Gruenling

Faculty Advisor: Christina Mastroeni

"Transparency in Written Communication"

The focus of this research was on the use of written communication on Instagram and how there tends to be a lack of transparency presented through popular fitness pages. The goal was to find if these were credible enough for their users to follow their workout plans, buy their products or download apps these influencers have created. I zeroed in on two pages and focussed on their similarities and differences. I found that a page that included scholarly sources, relatable information, people using their products and showing results, and formal written communication throughout their captions were more credible pages than those that did not include these aspects. Therefore, having transparency in our written communication is crucial.

FINE AND PERFORMING ARTS

Georgette Carter-Nobles

Faculty Advisor: Sue Gronewold

"The Erhu"

The poster will be comprised of the history and evolution of the erhu (Chinese violin), as well as its playing, construction, notation, teachings, repertoire, modernization, other uses, and most famous musicians. The purpose is to show the importance of this instrument that dates to ancient East Asia, show connections between the repertoire and its political history, and help the study of erhu in order to preserve its importance.

Latisa Harriott

Faculty Advisor: Kristina Junkroft

"Black Women and Their Hair in the Workplace"

This paper explores the cultural historical ancestry, as well as the policing, of African American hair with research done using published scholarly journals and government affair websites. Women of color in America have always been different and may continue to be as such because of the lack of society approval and the negative stereotypes toward their hair. Through a mixed-method approach using an online survey, we explored the experiences of college-level black women in regard to discrimination they have faced due to their hair at their place of employment. The data collected was summarized to show the extent and type of their experiences with this sort of discrimination. The goal of this research is to bring awareness to the issue of discrimination black women face in the workplace because of their hair.

Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

Meghan Landon

Faculty Advisor: E. Teresa Choate

"Artaud, Living Theatre, Performance Group: Unsuccessful Catalysts for Lasting Cultural Change"

In response to World War I, French artist Antonin Artaud tried to create a theatre so brutal that the world would never be able to stomach violence again. He was ridiculed for it. In the 1960s, the Living Theatre sought to use Artaud's theories as a protest against American themes of war and greed. The Living Theatre failed to create cultural change, as audiences felt attacked by their work. Having witnessed this failure, Richard Schechner of the Performance Group took new steps towards creating activism through theatre. Despite failure of his own, Schechner began to facilitate dialogue between actors and spectators. Each of the theorists paved the way for new artists to bring further social change, using theatre as a vehicle.

Kristen Purcell

Faculty Advisor: Joshua Burnett

"Self-Reported Stress, Anxiety, and Depression Levels and Music"

This research study aimed to find out if and how listening to music affected self-reported levels of stress, anxiety and depression within college students. This research experiment hoped to show that implementing music within lectures and studying, or just listening when feeling down, can decrease the three levels within these students. The main results were that even though music does lower self-reported stress, anxiety and depression levels, most students did not listen during lectures or doing homework. However, most of the research participants did turn to music when we are feeling down. Implementing quiet background music during lectures or allowing headphones during a work period may be beneficial for students in helping to care for their mental health.

GENERAL STUDIES

Martina Fahmy

Faculty Advisor: Sharmistha Das Iyer

"Can Stress Lead to Heart Attack or Stroke in Middle-Aged and Elderly People?"

Stress is something common that everyone experiences at least once in their lives and it can affect all ages, but it can have a greater effect as one grows older. The purpose of the study is to determine if stress can lead to a stroke or a heart attack in middle-aged and elderly people. The researcher sent an online and hard copy survey to 50 individuals, and 46 individuals responded. The results were that 65.22 percent of participants responded "no" to being stressed. However, 34.78 percent of participants responded "yes" to being stressed, and only 4.34 percent of females had a history of a stroke or a heart attack. In conclusion, the study results were inconclusive, and the data showed that there is little to no relationship that stress can lead to a stroke or heart attack. One of the limitations of the study was the small study group, which should be addressed in any future studies.

Tierra Hooker

Faculty Advisor: Eunice Nkansah

"A Study on the Relationship Between Creative Writing and Mental Wellness Among African American Youth"

Mental wellness can be defined as "inclusivity of emotional, social and psychological wellbeing in relationship to one's mental health" (Li et al. 2007). With a culture heavily infused with music, creative writing can be sought as a form of externalizing emotions or stressors. The goal of this study was to assess the relationship between creative writing and mental wellness among African American youth in the United States. To investigate this relationship, an online survey and a discussion forum were conducted to gather information and data. The results of the study revealed that implementation of creative writing can encourage healthy emotional expression among this population. The study recommends creative outlets to be incorporated into the learning environments of African American youth.

Gianna Lepanto

Faculty Advisor: Lydia Kaplan

"Negative Perceptions of Butches Within and Outside the Queer Community"

At the start of a new decade, the LGBTQA+ community continues to grow, and America continues to become more and more accepting of it. As perspectives change, so do stereotypes associated with labels attributed to those in the community. Butch lesbians and other masculine women have historically struggled against discrimination and harmful stereotypes. This paper examines the prevalence of some such stereotypes in 2019. A survey was sent asking respondents, both in and outside of the LGBTQA+ community, whether they agree or disagree with common butch/masculine female stereotypes. The results show that perceptions of masculine women are changing and that many older stereotypes are no longer agreed with by many.

Viani Maxwell

Faculty Advisor: Eunice Nkansah

"A Study Exploring the Relationship Between Cesarean Birth and Food Allergies in Children"

Many studies over the years have explored the possibility of environmental factors affecting children's gut microbiome, which can increase their predisposition to food allergies. These factors include cesarean birth, exposure to the outdoors, and contact with pets. In this study, a survey of 18 questions was sent to 150 randomly selected participants. The study hypothesized that cesarean birth increases a child's risk of developing food allergies. The results of the study revealed that vaginal birth correlated to a person's resistance to food allergies. Environmental factors were more closely related to the development of food allergies than genetic inheritance from immediate family members with food allergies. It was concluded that environmental factors correlated to a person's risk of developing food allergies in adulthood.

Madeline Faith Ross

Faculty Advisor: Dena Arguelles

"Visual and Cultural Analysis of Ellen DeGeneres"

I have conducted an analysis of the media star, Ellen DeGeneres, and her show, The Ellen Show, in order to discover the success of her rhetorical message. I have conducted visual and data analysis. In so doing, I have also performed a cultural critique of both the message sent and the audience. My findings will present the success of the star, the success of the message, and a critique of both.

Gabriella Smith

Faculty Advisor: Rachael Goldman

"The Peanut Allergy Epidemic and Possible Explorations"

Peanut allergies affects many individuals around the world regardless of age, gender, race, socioeconomic status, etc. The severity of this allergy can go from mild to severe reactions that can cause individuals to be hospitalized for days or weeks. A severe allergy to peanuts can even become so life-threatening that it can cause death for adults and young children if not treated right away. There are some countries like the United States and the United Kingdom that have a high prevalence of people with peanut allergy.

Mikaela Tixi

Faculty Advisor: Sharmistha Das Iyer

"Does Personality Influence Consumer Behavior?"

Do people have second thoughts before making an online purchase? How secure do they feel buying online versus in a store? Does a person's consumer behavior or comfort level while shopping depend on their personality? This study aimed to explore the pattern of behavior among consumers and how their personality traits influenced their shopping habbits. A survey was sent out to 100 Kean students, and data was analyzed from 58 students who responded. The results showed that most prefered their in-store experiences rather than making purchases online for a vairiety of different reasons, most of which related to their individual characteristics.

HISTORY

Angel Diaz

Faculty Advisor: Elizabeth Hyde

"Life of William Livingston During the American Revolution"

My poster will explore William Livingston's experience of war during the American Revolution in New Jersey and why Livingston became one of the most important founding fathers, especially for the state, and ended up being a general to lead the militia. New Jersey was at the center of the conflict, but Livingston initially tried to delay the revolution until New Jersey and other colonies were prepared, and that's one of the reasons why New Jersey was neutral at the beginning. My poster will analyze the work that Livingston did during the war and what his strategies were. I want to demonstrate that Livingston had a different way of leading the state by the way he applied his executive power of the state during the war and how it was helpful.

Research supported by: National Endowment for the Humanities, MakeHISTORY@Kean: William Livingston's World, AC-258915-18

Kayla Marie Doyle

Faculty Advisor: Elizabeth Hyde

"Uncovering the Unsung People"

The Department of History at Kean University and Liberty Hall Museum have started to research further into the issue of slavery on the property and the involvement of the families. This project aims to examine the letters and documents in the Liberty Hall Collection and the William Livingston Papers on microfilm. The information gathered will be used by professors, students, and museum educators. This project is only the beginning of uncovering information about enslaved people on the property. By focusing on the language of the letters and carefully analyzing how people discussed enslaved people, we offer insight into how people interpret the inhumane act.

LeAnna Gaiser

Faculty Advisor: Elizabeth Hyde

"William Livingston's Journey as a Lawyer"

William Livingston was born in 1723 in Albany, New York, to a wealthy and established family. Instead of following his family's business in trade, he chose a career in law. William Livingston graduated from Yale college in 1741. He did an apprenticeship under James Alexander, but later did one under William Smith Jr. Livingston devoted considerably more attention to his profession than most New York lawyers. This paper will present how he started his career as a lawyer in New York. This paper will be based off of sources concerning specific legal cases and the positions he took in them.

Sean Haugh

Faculty Advisor: Elizabeth Hyde

"Shaping Livingston's Time in Office"

Over the course of the second half of the 18th century, William Livingston became a revolutionary man with progressive ideas on how to move the country forward beyond British rule. Upon passing his bar exam in 1748, he became a lawyer and began shaping policy and religion in colonial New York. Livingston created the Independent Reflector, a non-newspaper publication, which was a platform to challenge the ideas of British Loyalists and members that supported the Anglican Church to support his own people. This paper will take a deeper investigation into how the pre-revolutionary ideas shaped the way William Livingston governed while in office.

John Mangano II

Faculty Advisor: Elizabeth Hyde

"William Livingston and the Farm of Liberty Hall"

In his work, *Philosophical Solitude* (1747), William Livingston wrote about his eventual retirement to the lifestyle of a gentleman farmer, his idea of living in nature contemplating, and religious enlightenment. Livingston was able to realize his dream when during the 1760s he began to buy land for his retirement on which he would build Liberty Hall. On the land, he built an orchard with many varieties of pear, plum, and apple trees with a good portion of different flowers. But through the analysis of his letters, receipts, deeds, maps, and inventories, I will address the question of the extent to which Livingston also farmed the land, and the extent to which Liberty Hall was self-sufficient.

Research supported by: National Endowment for the Humanities, MakeHISTORY@Kean: William Livingston's World, AC-258915-18

Ariel Rimpson

Faculty Advisor: Elizabeth Hyde

"William Livingston and Slavery"

In 1787 a group of prestigious and educated men devised the Constitution as the supreme law of the United States, but also to solidify one's freedom and rights. Mockingly, the same men who wrote and contributed to the Constitution partook in the enslavement of Africans and the slave trade. Through the lens of William Livingston's political life, following his years as an attorney, this project aims to define slavery and the slave trade during the 18th century. The research includes William Livingston's papers, an in-depth account of his thoughts and exchanges that transpired during his time as governor of New Jersey, and his role in slavery, but also his search for ethical change.

Thomas Weber

Faculty Advisor: Elizabeth Hyde

"The First Governor of New Jersey was a Rebel"

William Livingston served as New Jersey's first governor, during the American Revolution until his death in 1790. His role during the American Revolution was imperative for the success of the war effort, which meant his role as governor was under heavy pressure. As a central figure in the Revolutionary War, William Livingston was imperative for the dissemination of information across not only the 13 colonies, but also between fellow revolutionaries in the fight for independence. I will research these primary sources through the analysis of William Livingston's letters to Revolutionary War leaders. My poster will demonstrate the importance of William Livingston as a politician and governor in New Jersey and the overall impact between 1776 and 1790.

David Yambo

Faculty Advisor: Elizabeth Hyde

"William Livingston: A Critic of Education"

William Livingston was born in 1723 in Albany, a British colony of New York. By age 18, William Livingston had graduated from Yale College and was beginning a career as a lawyer. His time at Yale, however, made him realize the growing concern of religious influence in college education that had undermined religious and civil liberties. My research analyzes William Livingston's weekly paper, *The Independent Reflector*, through which he sought to inform the public of such concerns as the need to separate religion from education, as well as his letters that express his opinions on education in society during pre-revolutionary America. My poster will demonstrate William Livingston's criticism of religion in higher education.

HOLOCAUST AND GENOCIDE STUDIES

Danielle Drucker

Faculty Advisor: Adara Goldberg

"The Social Psychology of Genocide"

An important part of remembering horrific genocides like the Holocaust (1933-1945) is understanding how and why human beings are capable of committing such atrocious acts. For my research, I examined literature in books and journals that discuss the social psychology of genocide. Such literature considers past wars, culture, and statistics of mental illness as well as how they can mesh together in some capacities and lead to mass killings of a group of people. Researchers have also shown that dehumanization, a common practice all over the world, has contributed to society's ability to kill one another. My research will also highlight the stages of genocide as well as possible signs within cultures that could lead to one in the future.

Oscar Moncada

Faculty Advisor: Adara Goldberg

"Jewish Composers of the Holocaust Era"

My research focuses on songs written during the Holocaust era by Jewish composers. This study considers the background of popular Holocaust songs, including the Partisans Song, and how the composers' prewar lives and wartime experiences — in concentration camps, in ghettos, in hiding, or with the resistance — shaped their songs. Each song tells a unique story of struggle and hardship, as well as stories of triumph and uplifting of spirits during genocide. This research sheds light on the powerful role of music as a tool of resistance and survival, and contributes to our knowledge of Jewish composers who documented the Holocaust through their songs.

Alexander B. Stohler

Faculty Advisor: Catherine Nicholson

"Unfolding History: Exploring New Jersey Newspapers from the Holocaust and World War II, 1933-1946"

In an effort to bolster an existing project through the United States Holocaust Memorial Museum, various New Jersey newspapers were searched for mention and reaction to important historical events, mostly related to the Holocaust. Using parameters designed by the museum, I searched for references to specific events, such as Kristallnacht, the Evian Conference, the Anschluss, and several others. I recorded how each paper treated the events and how much or how little they wrote about them, including any complete absence of coverage.

PSYCHOLOGY

Zandra Grace Soriano Aguilo

Faculty Advisor: Rachael Goldman

"Autonomous Sensory Meridian Response and its Benefits"

There are many methods of therapy offered by medical professionals that aid in both mental and physical ailments. However, a new method called Autonomous Sensory Meridian Response (ASMR) is becoming popular. People are seeking ASMR for relief as an alternative to professional therapeutic help. According to Emma Blakely, Thomas J. Hostler, Guilia Lara Poerio, and Theresa Veltri (2018), ASMR increases positive emotions as well as reduces heart rate and skin sensitivity. These can assist in even overpowering pain, as the individual's focus is away from the stressful sensation. This paper will examine recent ASMR studies and how it affects the individual physically and mentally as well as lead to its potential as a professional therapy method.

Kyara Castano

Faculty Advisor: Verneda P. Hamm Baugh

"Physical Appearance and Judgement of Personal Characteristics"

The present study examined men's view of women's body sizes and whether their perception affects how they view a woman's personal characteristics. It was hypothesized that men would rate a thinner woman higher on personal characteristics. This hypothesis was partially correct. As expected, the skinnier picture of the woman was rated higher than the heavier picture on attractiveness and healthiness. Surprisingly, the heavier picture was rated higher on friendliness and approachability. This may be due to the fact that men find it easier to approach a heavier woman, since they might believe that the woman's standards are low, and they will not have to impress a heavier woman as much as they would have to impress a skinnier woman.

Brianna Crenshaw, Mallory Helmes

Faculty Advisor: Leslie A. Dacosta

"The Curse of Speech Anxiety"

Being that our majors are Communications and Psychology, we thought it would be great to fuse the two majors together and create a study that explores the effects of anxiety while presenting a speech. Since public speaking has become a requirement in so many classes, we figured that this was a topic that everyone could relate to. We feel that it will be very beneficial to figure out how giving more speeches correlates to anxiety levels. We hope to figure out what gives students anxiety when they are about to present a speech. In order to do this, we have created a survey and through systematic sampling, we will investigate the causes of speech anxiety.

Bridgette Devlin

Faculty Advisor: Joseph Preckajlo

"Are You Smarter Than the Bill of Rights?"

A concerning issue in modern society is the public's general lack of understanding of the Bill of Rights. Not only can an individual's rights be manipulated if they don't understand them, but their rights can also be fully taken from them without their knowledge. Do individuals actually know their rights, or are they just assuming they know based off of a subjective opinion of what seems just versus unjust? In order to measure participant's understanding of their rights, this researcher has created 10 questions based on the first five amendments. This researcher hypothesized that people with a minimal amount of knowledge of their rights would be more willing to give up their rights when compared to those who are more familiar with the legal protections guaranteed by the Bill of Rights.

Jeffrey Diez

Faculty Advisor: Richard Conti

"Sexual Orientation Equals Restitution Charges?"

In 2019, the Supreme Court of the United States decided to hear the case of Altitude Express, Inc. v. Zarda, which involved employment discrimination under the Title VII of the Civil Rights Act of 1964 related to sexual orientation. The aim of the present study was to assess jurors' recommended punishment towards homosexual vs. heterosexual men in cases regarding restitution charges. The present study hypothesized that homosexual men will receive harsher punishments than heterosexual men in civil cases. No significant differences were found.

Dayna Dobkowski

Faculty Advisor: Lydia Kaplan

"Grief Throughout the Lifespan"

Almost everyone in their lifetime will experience grieving the loss of a loved one. Because of this, it is important to understand how each age group reacts to grief so that one can provide an effective support system and prevent possible negative outcomes. Existing research suggests that each age group experiences grief differently and could be prone to certain problems if not appropriately addressed. With the combination of this prior research and a survey of various age groups, certain types of emotions and behaviors found across the lifespan have been analyzed. Grief during childhood, adolescence, adulthood, and elderly years have subtle yet important distinctions that separate one group from the other.

Maria G. Dominguez

Faculty Advisor: Verneda P. Hamm Baugh

"Cognitive Benefits of Word Recognition in Bilinguals"

Working memory is part of the short-term memory that is concerned with immediate, conscious perceptual and linguistic processing. Baddeley (2000) defined working memory as a three-component model that refers to a limited capacity system that allows for temporary manipulation and storage of information for complex tasks such as reasoning, learning, and comprehension. Research has been conducted on monolinguals and bilinguals to see if there was a cognitive advantage in memory. The present study was designed to examine the ability to recognize low-frequency and high-frequency words in monolingual and multilingual participants. It was hypothesized that multilingual participants would recognize more high-frequency words than monolinguals.

Ryan Ellison

Faculty Advisor: Franklin Turner

"The Impact of Toxic Masculinity on the Conformity and Expectations of Manhood for Men of Color"

Toxic masculinity is a term that refers to the cultural norms and adherence of stereotypical masculine male behaviors, which harm society, especially men. This concept brings up the question of what it means to be a man in today's society. Society through toxic masculinity has put unwarranted expectations on young men regarding their manhood. Exposure to toxic masculinity can prevent young men from fulfilling their potential as well as causing unhealthy psychological development (Ramaeker & Petrie, 2019). This research examines how toxic masculinity affects the well-being of young men, particularly young men of color.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Christina Esker

Faculty Advisor: Joshua Burnett

"Parental Alienation: Individual Factors that Contribute to a Child's Rejection of a Parent"

Fourteen college students from non-intact families completed a survey regarding recollection of their relationship with parents, exposure to alienating behaviors, and visitation as a child, among other measures. Results revealed participants were exposed to alienation more frequently when lacking support for the other parent-child relationship. Early age at separation and lack of support increased the likelihood of visitation being discontinued, and high ratings of enmeshment also corresponded with reports of feeling pressured to reject the other parent. This body of work adds to the existing literature on parental alienation and highlights the importance of the vulnerabilities that contribute to a child's rejection of a parent.

Jennifer Garza

Faculty Advisor: Verneda P. Hamm Baugh

"The Stroop Effect and Time in Unscrambling"

The Stroop effect is a demonstration of cognitive interference where a delay in the reaction time of a task occurs due to an incongruence in stimuli. For example, it takes longer to name the ink color (BLUE) when it does not match the color word (RED). In the original Stroop task the participants were presented with the name of the color under three different conditions: the word BLUE written in red ink (incongruent), BLUE written in black ink (neutral), and BLUE written in blue ink (congruent). The present study was designed to further evaluate the Stroop task in an anagram completion task. The study examined whether there was a delayed response for identifying scrambled names of colors written in either an incongruent color or black ink.

Symone Gelay

Faculty Advisor: Richard Conti

"The Effect of Diagnostic Labeling on Juvenile Offenders in Criminal Cases"

Conduct disorder is a behavioral disorder diagnosed among children. Symptoms may include irresponsibility, truancy, participating in illegal activities, and potentially causing physical harm. The disorder may be brought on due to neurologic factors, suffering from a traumatic event, such as the loss of a loved one, or social influences. This study seeks to contribute to the research within the psychological and criminal justice disciplines within juvenile theories. It is hypothesized that congenital conduct disorder will elicit a lesser sentencing recommendation than acquired conduct disorder.

Research supported by: Research Recruits program, Kean University

Symone Gelay

Faculty Advisor: Richard Conti

"The Relationship Between Deception, Cerebral Lateralization and the Dark Tetrad Traits"

There has been little research on the relationship between deception, cerebral lateralization, and the dark tetrad traits. The present study will examine these traits, including the recent introduction of everyday sadism to the Dark Tetrad traits of Machiavellianism, narcissism and psychopathy, in a non-clinical population. It is hypothesized that non-right-handedness (measured as a continuous variable) will be related to primary psychopathy, narcissism, and Machiavellianism, while secondary psychopathy will be related to everyday sadism and deception. Implications for further research will be discussed.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Stephanie Jimenez

Faculty Advisors: Joseph Preckajlo, Richard P. Conti

"The Effects of Gender Identity on Criminal Sentencing Length"

This project examined biases regarding a defendant's gender identity and criminal sentencing. Previous research suggests that gender perceptions may favor female defendants during sentencing hearings and result in lengthier sentences for male offenders who commit similar crimes. This study used a between-groups, one-way experimental design. Results indicitated male gender differed from each of the other three conditions. Post hoc tests revealed the trans man condition received the longest sentencing recommendation followed by the trans woman, woman and male conditions. Implications for future research are discussed.

Kia Elizabeth Labarrere

Faculty Advisor: Lydia Kaplan

"Imaginary Companions and the Development of Personality and Self"

This study will discuss the prevalence of imaginary friends or companions, among children and how it directly affects the development of self and personality. Imaginary friends, better known as imaginary companions (ICs), are discussed in regard to its nature to positively and negatively affect cognitive and behavioral development, as well as creative abilities, narrative skills, and relationships with peers and others. The research will explore the reason behind the creation of ICs during childhood and review previous research on the prevalence of ICs throughout cultures and countries. The study consisted of a sample of 25 university students (15 females; 10 males) who completed a mix of online and paper surveys on personality and whether they did or did not have ICs during childhood.

Tingyan Liu

Faculty Advisor: Verneda P. Hamm Baugh

"International Students and Perceptions of Psychological Adjustment"

This research study examined the difference in psychological adjustment between regular international students and exchange students from a transnational university. There are two groups of participants. Group 1 included regular international students, and Group 2 included exchange students from a transnational university. Half of each group read a scenario about an exchange student from a transnational university. The other half read a scenario about a regular international student. Then, participants completed a questionnaire. The participants' feelings toward the scenarios reflected their psychological status of studying abroad. It was hypothesized that transnational students would have better psychological adjustment than regular international students.

Patricia Morel

Faculty Advisor: Verneda P. Hamm Baugh

"Behind Every Face is a Story: Stereotyping in the Trump Era and its Manifestation Across Generations"

The Trump era has undoubtedly brought different types of controversy, such as race and ethnicity, to the forefront and biases of the individual may or may not be changing in response. This study examines two different generations and their ease of stereotyping across four different racial and ethnic identities. It was hypothesized that older (45+) participants will be more likely to stereotype Jewish and black individuals whereas their younger counterparts (18-30) will be more likely to stereotype Hispanic and white individuals. The purpose of the study is to understand the relationship between age and prejudice as a result of contemporary culture.

Jessica Onorati

Faculty Advisor: Shai Tabib

"The Relationship Between Academic Year and Employment Among College Students."

In 2017, it was estimated that approximately half of full-time undergraduates were employed. Previous research had found an inverse relationship between grades and employment status among college students. Numerous factors contribute to student employment, but few studies have considered academic year as a variable. Archival data was extracted from a larger project to investigate this relationship. In the original study, participants (N=348) completed a survey that included questions about their academic year and employment hours. A Spearman correlation found a positive moderate association between the two variables, which suggests that students spend more time working as they progress through college. An important limitation was the underrepresentation of freshman students in the sample. Future research should further examine the relationship between academic year and employment hours with a more representative sample.

Adedotun Osholowu

Faculty Advisor: Verneda P. Hamm Baugh

"City of Origin, Race, and Impressions of Academic Success"

This study expands on previous research that examined the impressions college students form about the future outcomes of a black male undergraduate freshman from Chicago, IL, from Wellesley, MA, or who is an international student. The freshman was evaluated on support system, curiosity, emotional intelligence (EQ), work ethic, fitness, chances of graduation and graduation GPA. Results found that the international student and student from Chicago were rated as having a higher work ethic than the student from Wellesley, MA. In the present study the image of the black male student was replaced with an image of a white male student. The goal of the study is to determine if race of student will lead to different results.

Amanda Ross

Faculty Advisor: Verneda P. Hamm Baugh

"Athletic Status and Physiological Response in Stressful Situations"

Significant research has been conducted on how stress impacts the body, and how the body functions as a response to stress. There has not been significant research done to determine if highly trained athletes deal with stressful situations more favorably than non-athletes. The present study was designed to test whether athletes have a lower increase in their heart rate than non-athletes after viewing a video depicting a stressful event. The participants' heart rates will be measured before and after the video is presented. It was hypothesized that athletes will have a lower increase in their heart rate due to their physical training regimen and experience of stressful situations in competitive situations.

Zydrune Rudaviciute

Faculty Advisor: Jane O'Brien

"Prevalence of Dental Anxiety in Patients and Its Effects"

Dental anxiety is a common issue and a barrier for proper dental care. It can have serious consequences on an individual's oral and psychological health and creates difficult treatment for dental professionals. The aim of this study was to assess if higher levels of dental anxiety and fear are associated with sociodemographic factors, past traumatic events, and physiological responses. The sample included 68 Kean University students filling out a demographic questionnaire, a dental anxiety and fear survey, and an exposure survey. The study revealed that gender and exposure to past traumatic events were large contributors to dental anxiety. Hopefully the study will allow dentists to better manage and reduce anxiety for future patients.

Aishwarya Singh

Faculty Advisor: Verneda P. Hamm Baugh

"Color and Object Identification in Ambiguous Figures"

Vision is stimulated by many factors such as color, shape, depth, and distance of a given stimulus. One such intriguing stimulus is an optical illusions. The purpose of this research project is to further the knowledge about how color plays a role in identifying objects within ambiguous or reversible figures. Participants were presented with either black and white illusions or the same illusions in color. It was hypothesized that participants who saw the illusion in color will identify more objects within the presented illusion.

Pedro Hans Toscano-Salinas

Faculty Advisor: Sharon Boyd-Jackson

"Antipsychotic Medications and the Impact on Physical Health and Longevity"

There is a disparity between mental health and physical health services (Gill et al., 2009). It is important to understand why so many persons in recovery are passing away from treatable and preventable illnesses. Examining this issue can help professionals understand the reasons behind premature deaths. This research reviewed the literature in psychiatric rehabilitation and related fields. Current research shows that side effects of medications (Gill et al., 2009), the development of metabolic conditions (Dikeç et al., 2018), and lifestyle factors of persons in recovery (Stanley & Laugharne, 2014) are possible considerations that can impact quality of life and lead to reduced longevity (Wykes et al., 2017).

SOCIAL SCIENCES

Kebira Belmaachi

Faculty Advisor: Julia Nevarez

"The Hudson Yards, New York City Urban Development and Big Data"

Urban development that is sustainable and efficient is leading newly designed spaces in the city. Urban policy is increasingly relying on big data to develop policy that affects the use of the spaces in the city. Based on notions of prosumption, individuals add content through mobile technologies in digital platforms as data content to monitor and implement specific interventions in urban space. Big data, the development of databases according for the recording of individual's predilections, is increasingly used to implement and modify behaviors in urban space. This poster presentation will describe: 1) Hudson Yards, New York City, as the largest private urban development in the United States that opened in March 2019, and 2) how big data and "quantified community" model initiatives are customized for Hudson Yards.

Research supported by: Research Recruits program, Kean University

Monique Brownlee

Faculty Advisor: Lawrence Chang

"The Rise and Fall of the Islamic State"

The September 11 attack triggered a seismic shift in U.S. strategic operations towards the Middle East and culminated in the U.S. invasion of Iraq in 2003. The chaos unleashed by the invasion and the disastrous policy of de-Baathification implemented by the Coalition Provisional Authority led by Paul Bremer provided a fertile ground for the rise of Al Qaeda in Iraq and its successor, the Islamic State. This research will explore the different factors that contributed to the rise and the ultimate fall of the Islamic State.

Ayana Goodwin

Faculty Advisor: Celene Krauss

"Black, Low-Income, Transgender Women in Society: Movements, Murders, Discrimination"

Transgender women of color have been key players at the forefront of movements throughout history. The Gay Liberation Movement that started with the Stonewall Riots was led by transgender women of color. These weren't upper-, or middle-class women fighting for basic rights; these were women who lived and made a way for themselves on the street. This lifestyle made black trans women an easy target. In this presentation, we'll be able to pinpoint the problems and discrimination stemming from the intersectional issues faced by black poor transgender women. It will look at the lives of these women as they navigate society.

THE DOROTHY AND GEORGE HENNINGS COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY

COMPUTER SCIENCE AND TECHNOLOGY

Samer Adawi

Faculty Advisor: Patricia Morreale

"Assessment of Programming Languages Used for Data Science"

The intent of this research project is to identify the best programming languages for use in the field of data science now and in the future. This project researched the pros and cons of four selected languages for use in data science. Python, Julia, Java, and R were compared and contrasted to see which langauage supports data science visualization and which language is the most beneficial to a newcomer to the field. The overall contributions of this research project include the examination of four of the most widely used data science languages and the determination of which programming language would be the best to learn, why it is the best, and an examination of the future of the language. This analysis is accompanied by visualizations in the specific languages.

Asja Alic

Faculty Advisor: Canan Eren

"The Development of Data Warehouse for Colorectal Cancer"

In this research, we used SQL Server to create a data warehouse for colorectal cancer data, which we received from the American National Cancer Institute. We wrote queries and conducted interpretation of the results in order to identify new possible patterns and behaviors of the disease.

Liam Allen, Anibely Torres, Bria Williams

Faculty Advisor: Juan J. Li

"Detecting Boundaries of Parking Lots and Detecting Occupied Spaces Within a Lot Using Deep Learning"

In order to recognize parking spaces based on video feed from a quadrocopter with set flight path, a neural network-based application was developed using Python, which utilizes a neural network based on the Tensorflow and cudnn architecture, capable of generating bounding boxes based on training data using the faster_rcnn_resnet101_kitti algorithm/model. Input data from COWC, drone footage, and Google maps was scanned using Selective Search with the RCNN (Region Convolutional Neural Network), fed to a CNN for object classification and bounding box regression. Though the application only outputs raw .xml and .geojson output, it could be expanded into an application capable of generating purpose-tailored analytics and statistics.

Research supported by: Research Recruits program, Kean University

Nicholas Alvino

Faculty Advisor: Ching-yu Huang

"Interactive Web Portfolio"

When the task of creating a personal portfolio came to mind, the outcome was destined to be interesting. The plan was to create a lot of different designs as once a concept was picked, beginning to develop a plan as constant changes can complicate the completion of the project and the timeline and deadlines would not be met. The design chosen includes a one-page concept due to the ease of access to all information being present on one home page, leading to easier navigation throughout the site. The web page involved quick links that had sliders to open the sub-menus that involve no scrolling or searching as the sub-menus illuminate if the user hovers over them and the menus slide out.

Nicholas Alvino

Faculty Advisor: Daehan Kwak

"Citizen Sentiment in Social Media for Public Opinion"

In recent years, social media has become the political space for campaigning and governing, changing the way information is sent from one population to another. Governments have been trying to focus more on a citizen-centric model of society, making priorities and services driven more by citizen needs rather than the governments' capability. It has become a daily routine for political leaders to use social media to send messages influencing campaigns and interacting with the public. Twitter provides a plethora of potentially useful information that could be collected and analyzed to weigh public opinion. It is essential to monitor public opinion on social media for negative responses, petitions and any other concerns citizens have.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Nicholas Alvino, Samuel Fajuyi

Faculty Advisor: Ching-yu Huang

"Relationships Between Crime Rates and School Attendance"

Early in life, we all heard the saying, "Go to school; it'll keep you out of trouble." And to some, this may be a reality, depending on their neighborhoods. With increased popularity in data-mining techniques, it is now possible to generate meaningful results from public datasets. The research involves using large datasets with information regarding crime rate and school attendance in the New York City area. By comparing data retrieved from these datasets, a clear conclusion can be drawn by finding the correlation, if any, generated from these two unique aspects of society. The information we deduct from this study can be used as clear indicators to cities and high-crime areas that school attendance is crucial in keeping crime rates low.

Andres Arauz

Faculty Advisor: Patricia Morreale

"Comparative Case Study of iOS Programming Languages for Applications: Objective-C vs. Swift"

Mobile application design is a new area of innovation and invention. Software designers who are working on developing a mobile application for Apple's iOS have had only the Objective-C language since the beginning of this operating system. Eighteen years after Apple first used Objective-C, Apple introduced its own new language, Swift, which was characterized as "Objective-C without the C." This research project presents a comparative case study of two native iOS programing languages, Objective-C and Swift. Multiple characteristics of each language were examined including their readability, writability, reliability, and cost. Experiences from experts on each programming language are included in the research as well as lessons learned.

Research supported by: U.S. Department of Education, First in the World, Research Active Mentor (RAM) program, P116F150028

Nihal Barcin

Faculty Advisor: Ching-yu Huang

"Data Mining and Visual Analytics Using Tableau"

This research works on how Citi Bike rentals in NYC were affected by weather conditions. Bike data and weather data from 2016 and 2017 were collected from open sources — Citi Bike-user dataset recorded by the Citi Bike team and weather dataset from the internet. The datasets were processed by MS-Excel and Tableau software, which is one of the best visualization tools for work on big data. Tableau can help to calculate the correlation values between the trip duration and weather, which gives us an idea about how the weather impacted Citi Bike usage. This project concluded that the usage of Citi Bikes over the months was strongly affected by the change in weather conditions.

Terrence Barone

Faculty Advisor: Patricia Morreale

"Java vs. Python"

Programming languages must be selected to fit the problem to be solved. This research project illustrates an experiment involving the Fibonacci Sequence and demonstraing recursive and iterative algorithm implementation, which will help in choosing the best language for problem solution. The two languages that will be used are Python and Java. Differences between both languages are presented, and the mertis of such well-known and useful languages are examined. The experiment tests the speeds of both languages, and the resulting code is provided for comparison as well.

Gurmukh Bedi

Faculty Advisor: Daehan Kwak

"A Voice Virtual Help Desk System"

In this study, an AI-algorithm is developed and implemented to a virtual assistant, the Google Home, that will help students get answers to questions they need and reduce traffic for the human receptionist. A decision dialogue tree is implemented onto Google Home by using DialogueFlow, and corresponding actions are carried out using the IFTTT API and creating Applets. This data will contain mostly all the questions that students ask daily to a receptionist. As a proof of concept, the virtual help desk will be deployed near the department entrance, and users will fill out a short questionnaire to analyze the quality of help and the answers that were provided. We anticipate that the virtual help desk will be beneficial for students, staff and faculty.

Research supported by: Research Recruits program, Kean University

Gurmukh Bedi

Faculty Advisor: Kazi Zunnurhain

"NextManUp"

NextManUp is a mobile application that we are trying to improve based on the previously developed app, which helps users find a public space, most likely a public playground, and reserve it. This app is designed to reserve a nearby playground before anyone else in the area. This app will consist of various features like communicating with other players, a list of nearby playgrounds, reserving the park, and forming a team, etc. This app will be really helpful for the players who live in busy localites and can never find a spot for themselves because it's preoccupied. This app modification will implement a queue, so everyone can have a chance to play, to form a team with the help of the queue and also to place a request for a match with others.

Harsh Bhatia, Yahya Nafees

Faculty Advisor: Patricia Morreale

"Using Programming Languages for AI Implementation"

Artificial intelligence (AI) is a popular term in the world of technology. Every organization wants to implement automation in their processes to help reduce costs and to better support order fulfillment, customer satisfaction, and fraud detection, while providing predictions, inventory management and advanced techniques to help an organization thrive. This research project investigates how organizations can successfully implement AI. The research identifies how the selection of the correct programming language and support tools is necessary in developing AI infrastructure for business success.

Brian Blondet, Christopher Garcia, Kyle Murfitt, Andres Gomez, Matthew Seesselberg, Robert Kulesza

Faculty Advisor: Jing-Chiou Liou

"Tutor Analytic Solutions (T.A. Solutions)"

T.A. Solutions seeks to provide administrators of tutoring programs a means to easily monitor their program with digitally logged sessions, automated flagging and data analytics, while also streamlining the sign-in process for both student and tutor through mobile and web-based systems. As a result, T.A. Solutions will aid administrative decision-making by informing users of issues within the program and predicting program growth.

Juan Cardona, Abdulrahman Elsaadawi

Faculty Advisor: Patricia Morreale

"Why Should Python Be the First Language to Learn?"

Programming languages are among the core subjects in computer science, and learning a programming language is one of the first steps in becoming a programmer. Choosing a first programming language can be difficult. This research project compares and analyzes different programming languages. The results show why Python is a great choice for a beginner. Code fragments are presented to provide comparisons between Java, Python, and JavaScript and demonstrate how the basic syntax of each language is structured. Research was done to analyze why Python has been successful and the impact it has had on the modern digital world.

Anissa Champion

Faculty Advisor: Jenny Li

"Recurrent Neural Networks for Predicting Financial Data"

In this project, we are going to do the following: 1) We are going to collect sequential financial data to train an AI with recurrent neural networks (RNN); 2) We are going to investigate the creation of RNN that are most appropriate for financial data; and 3) We are going to investigate and measure the accuracy of RNN in predicting financial data. Overall, we hope to contribute to the application of AI to the financial industry through our experimental results and reports.

Shiyi Chen

Faculty Advisor: Ching-yu Huang

"Image Classification Using TensorFlow on Flowers"

Recognizing the types of flowers is a challenging job for a human because there are many types of flowers and some of them look similar. This project is to study how to develop an integrated system that utilizes the Google TensorFlow package to recognize the flower images that users upload through a browser. We collected 200 different flower images as a training set for TensorFlow to build the model and another 50 images as the test set to calculate the accuracy of the model. When users upload an unknown image, the system will automatically call the model to predict the unknown uploaded image. The classification results are displayed on the browser.

Xavier Doh

Faculty Advisor: Daehan Kwak

"Selecting Routes Based on Crash Data"

Despite the amount of information displayed by GPS systems, other factors such as the distribution of "accidents previously occurred along a route" are not incorporated. This study integrates navigation systems to visually display a real-time risk level of accidents that occurred, including the type of accident frequently involved on the selected road to keep the drivers notified and attentively pay attention to the road laws in order to safely get to their destinations. We developed a web-based navigation system using Google Maps along with public data on Motor Vehicle Collision Reports for New York roads capable of displaying this information, and while using Python, MySQL, JavaScript, and HTML.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Saniora R. Duclervil

Faculty Advisor: Kazi Zunnurhain

"Developing a New Software Development Life-Cycle Tool Based on DevSecOps"

Cybersecurity has become an important and crucial part of our society. Software is often developed with no guidelines and security components, which diminishes the quality and security of the software. Research was done on different Agile development life-cycle models including: Behavioral Driven Development, Scaled Agile Framework and DevOps and DevSecOps. We decided to focus on the DevSecOps development life-cycle model. Different types of DevSecOps models were found and analyzed. The characteristics of each were gathered to develop the criteria for a new and effective DevSecOps model. Our results show that the DevSecOps models were more reliable for our new model development.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780, U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Keith Penaranda Estrella

Faculty Advisor: Patricia Morreale

"The Potential for a Universal Programming Language"

As more and more programming languages grow and evolve, programmers often learn a variety of different languages for different needs. If there was a Universal Programming Language, one language could be learned, and this would remove the need for learning multiple languages. This research analyzes the differences between languages and identifies the traits and features each language demonstrates and assesses the possiblity that all of the positive features in a variety of languages can be incorporated into a single programming language.

Andrew Floyd

Faculty Advisor: Daehan Kwak

"A Word Cloud Traffic Information Map Based on Twitter Mining"

Most countries have urban traffic issues, such as traffic congestion and car accidents. With the help of Twitter, traffic information can be extracted from people who post on or about a route. A tweet mining system is developed to crawl and collect tweets containing traffic information using the Twitter API. Python is used to build an interface that crawls and extracts the tweets from Twitter using tags, geotags, or any other information regarding what is happening in an area. The metadata is then collected and used to build a word cloud to visualize the tweet's data. Using Google Maps API, the word cloud is embedded on the specific area or road.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Mark A. Gaglioti Jr.

Faculty Advisor: Daehan Kwak

"Video Game AI Concepts for Educational Advancements"

The USA's educational system is tackling milestones with artificial intelligence (AI) capabilities. It creates hyper-personalized learning techniques that the student can get through the AI system. All students have complex learning techniques that make them different from everyone else, but most AI systems are not programmed this way. For example, WebAssign is structured to provide problems, and students answer them accordingly. Video games contain complex AI systems (like the FSM) to manifest environments for its user. Users tackle challenges provided by the developer at their own pace to succeed. Therefore, manipulating this algorithm to engineer a learning experience for students to uniquely learn and concurrently meet academic standards.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Seth Gallucci

Faculty Advisor: Juan J. Li

"Toward an AI Coder"

With older programming languages such as Java, there tends to be a loathsome amount of highly repetitive and lengthy code that — by the design of the language — must be manually included; this tends to disrupt focus on the higher-level task at hand. More advanced development environments usually have features that partially relieve this annoyance yet still cause inconvenient attention breaks. This project will cover the design, creation and application of Recurrent Neural Networks (RNN) meant to automatically complete code statements by taking advantage of the aptitude of RNNs in sequence and series prediction. The ultimate goal is to enable faster, smoother programming experiences.

Carley Garlasco

Faculty Advisor: Ching-yu Huang

“Mining Data of NBA Players, Performance in Games in Relationship to Their Pre-game Tweets”

The goal of this research is to discover if there is a correlation between NBA players’ performance in games in relationship to their pre-game tweets. Twitter is a widely used online social media platform. Many NBA players will tweet before their game, either their opinions or overall feelings. Team leaders are very important when it comes to winning games. The information of the top 100 players from ESPN will be collected. Large sets of data pertaining to the NBA players’ stats and tweets will be automatically downloaded and analyzed. To measure this correlation, Python and statistical methods such as Z-score and Chi-Square will be adopted in this study, and data visualization will be used to help understand the data distribution and results.

Carley Garlasco

Faculty Advisor: David Joiner

“N-Body Modeling: Accelerating the Validation of Planet Detection”

The goal of this project is to develop a GPU accelerated code for validating the gravitational stability of planetary systems detected using radial velocity techniques. Validation of the code will be performed by comparison to a community N-Body code for planetary dynamics, MERCURY. Code will then be modified to read in data, based on the posterior distributions of a Monte Carlo Markov Chain fitting solution to a radial velocity model. These will be programmed to run simultaneously in parallel on CUDA hardware. In addition, we will be running these models and comparing them to the MERCURY code on our local cluster. We anticipate that the results of these studies will lead to advancement in understanding the stability of planetary orbits.

Shiheng Ge

Faculty Advisor: Jing-Chiou Liou

“iWatch Personal Health Management System”

Nowadays, due to the huge amount of data information, most enterprises in the market upload the collected data to the cloud with unlimited storage capacity, timely software updates, and other capabilities. But the downside is that if you don’t have a powerful cluster of computers, you won’t be able to get the information you need from the cloud in a timely manner, because you’ll need time to download or upload the information you need. In this study, we will learn relevant knowledge and make an application program, so that the mobile phone we often use in our daily life can process the data acquired in recent time, and we can obtain the required data analysis even if there is no network.

Lateef Adekolapo Goloba

Faculty Advisor: Jean Chu

“A Dynamic Analysis of Smart Taxicabs’ Mobile Applications (a Case Study of Uber, Taxify and Lyft)”

The study will draw round the motivations and specifications of two simulators — one is meant to copy current smart taxicabs’ behavior and the other is to design a model that will implement a dynamic mobile application for ride-sharing among Uber, Lyft and Taxify users. It then examines the distributions of passengers to Uber, Lyft and Taxify drivers to pick up and take them to their various destinations. Finally, the study will examine the simulation using the trip records to quantify the ride-share potential of the system.

Andres Gomez

Faculty Advisor: Jean Chu

“Cybercrime and Data at Rest”

IT professionals have blind faith in traditional security methods, such as a firewall to protect a company and its data from cybercriminals or hackers. Companies around the world need to collect and store data from their customers in order to build up a profile, which can be used to push targeted products and services. However, sometimes the businesses fail to protect their most critical asset, which is “data,” against unauthorized or unwanted use. Hackers have shown very sophisticated ways to break into an organization’s network to steal data. Data is usually classified as in transit or at rest. This study focused on data-at-rest protection by using a sophisticated method provided by an enterprise solution called Vormetric.

Andres Gomez

Faculty Advisor: Jing-Chiou Liou

“Internet of Things and Vulnerabilities”

The Internet of Things (IoT) is the network of physical devices, vehicles, home appliances, and other items embedded with electronics, software, sensors, actuators and connectivity that enables these objects to connect and exchange data.

Eduardo Granados

Faculty Advisor: Patricia Morreale

“Memory Safety: C++ vs. Rust”

When writing an application, developers typically include pointers to a variety of data objects. Sometimes, at runtime, the code is executed in a way that it may accidentally use a pointer to an invalid or deallocated space in memory. This will usually cause the program to crash. This bug is known as a dangling pointer. This research project will demonstrate how code in C++ can run into this issue. A comparison will be made with the Rust programming language, whose syntax helps developers avoid dangling pointers and ensures memory safety.

Moushume Hai
Faculty Advisor: Mira Franke

"Drone Data Science and Arduino-Based LIDAR-Lite"

Camera-equipped drones are capable of gathering local data about a region. In this project, a DJI Mavic Pro drone was used to gather nearby aerial photos and videos of Kean University parking lots. The drone provided access to real-time flight-related data, including: take-off/current location (GPS coordinates), temperature, humidity, altitude, speed, pressure, visibility, cloud cover, wind direction, total mileage, air flight time and altitude above sea level. An Arduino-based LIDAR Lite scanner with infrared laser technology was also incorporated to gather 3D spatial images of rooms and small-scale objects. The acquired data was later transferred to an SQL database so that both technologies could be used for AI image-recognition training.
Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Moushume Hai
Faculty Advisor: Juan J. Li

"Investigation of Deep Learning for Intrusion Detection"

Artificial intelligence is an area of computer science that emphasizes the creation of intelligent machines that work and act like humans. It enables machines to adjust to new inputs and perform humanlike tasks. In this study, we will train the AI with software programs to complete coding statements for programmers. We will implement RNNs using TensorFlow to generate unfilled statements. RNNs are recurrent neural networks, which is a class that is powerful for modeling sequence data like time series and natural languages. We will then detect the security of our data through validating the predicted sequence and the actual sequence. The findings will indicate deviation from normal code sequences, which could be caused by errors or security threats.

Peter Hannon
Faculty Advisor: Daehan Kwak

"Sentiment Analysis of Traffic Tweets for Roads"

With the rise of navigation applications that provide real-time user-based information, such as car accidents, potential police vehicles, and construction, very few people take the initiative to provide this potentially useful information to the given navigation applications, but may instead provide it to Twitter. By harvesting tweets that have the hashtags of given roads, the overall opinion and sentiment value of the road can be determined by sending the tweets through IBM Watson's "Tone Analyzer" to determine the emotion of the tweet. This data can then be simplified in order to represent positive or negative emotion and then ranked on a scale measuring the public sentiment, showing how people like/dislike the road.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780, Students Partnering with Faculty (SpF) summer research program, Kean University

Eric Heitman, Gensley Dumond
Faculty Advisor: Kazi Zunnurhain

"Parking at Kean University: What Can Be Done?"

With a population of over 16,000 graduate and undergraduate students, Kean University continues to grow. About 2,000 of these 16,000 students live in the seven residence halls across Kean University's main campus in Union, New Jersey. As parking availability continues to become a major complaint from the 14,000 students who commute each day for classes, it is apparent that a solution must be provided to the growing commuting body. The desired outcome for this project is to provide students and faculty with an appropriate range of times where there would be the most amount of empty parking spots present in the lot, Monday through Friday.

Daniel M Henriques
Faculty Advisor: Daehan Kwak

"Information Systems: Web App for Smart Transportation"

Real-time travel-time information provided by online (or mobile) maps, such as Google Maps, Bing Maps, HERE (Nokia), MapQuest and Waze are services that are getting better every day and are making it more and more possible to avoid bad traffic and to let you know roughly when you will arrive at a certain destination. Such online map providers use historic traffic information along with collected traffic information (by crowdsourcing, pulling speed info from mobile phones, etc.), use algorithms to construct the fastest route, and calculate the Expected Time of Arrival (ETA). With the abundance of this information, a web application is developed to easily compare available route options, which would aid the user in the process of route selection.

Huichao Huang
Faculty Advisor: Ching-yu Huang

"Image Classification Using TensorFlow"

Gesture recognition is an important topic in the human-computer interaction area. Recognition of the meaning of gestures would help computers communicate better with humans. It can even bring many conveniences in terms of technology improving life. This project uses Google TensorFlow to build a model by training using hundreds of selected images that are assigned type numbers 1-10. Each number represents a different gestural meaning. Another dozen image sets are used to calculate the accuracy of the model. The study also builds an integrated web system that automatically realizes the image classification in a webpage by recognizing the gestures of numbers 1-10 for an uploaded unknown image against the training model.

George Jimenez, Victor Herman, Giovanni Cabrera
Faculty Advisor: Ching-yu Huang

"Correlational Analysis Between NFL Attendance, Weather, and Health"

This project attempts to outline the correlation between three data sets. These data sets include the attendance at NFL games in previous seasons with relation to weather and health during those dates. The NFL data set includes dates, attendance, and event location. The weather data set includes information on weather conditions in cities where NFL games are played. The health data set provides annual reports of health outcomes on a yearly state-by-state basis, as per the WHO. The health outcomes are outlined considering behavior, environment and clinical care. Various data mining techniques will be used, such as: visualization, binning and chi-squared, in order to analyze the data and determine the relationship between the three data sets.

Joan John
Faculty Advisor: Daehan Kwak

"Health Care Resource Access via a Virtual Voice Assistant"

As technology advances, we are experiencing tremendous growth of interaction between humans and machines. Within that growth, the Internet of Things (IoTs), such as smart speakers, like the Amazon Alexa and the Google Home, are revolutionizing our lives. In this research, a virtual voice assistant is implemented into Google Home to provide patients or individuals with the power to search for community resources, taking into account low literacy skills and limited access to technology. Our virtual voice assistant will guide users and provide information regarding community resources and needed services tailored to the individual's needs, so that individuals can progress towards recovery and well-being.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Aaron Jordan
Faculty Advisor: Patricia Morreale

"Program Efficiency"

Depending on the programming language selected, programming techniques, such as excessive function calls or memory aliasing, may be used, which can lead to runtime errors or other execution issues. Programming optimization refers to the design of programs for efficient or appropriate use of resources, which is an important part of program design. When developing any program or software, developers must ensure that the program runs as it should and that the program efficiently uses resources and memory, deallocating or releasing resources when no longer needed. Additionally, selected data structures should be correct and utilized appropriately for the program. This project investigates programming efficiency, an important design issue when developing any software, to ensure that the program runs as expected, using the correct effort and space needed.

Arios Jules
Faculty Advisor: Jean Chu

"DevSecOps a Faster Approach to Software Development with Security in Mind"

This research will examine the viability of DevSecOps as an alternative method to reduce software development time delivery, while addressing the issue of security. In this study, I explore the progress that has been made in this field, the challenges that remain, and how they can be tackled, as well as the process of using open source tools to emulate penetration testing on DevSecOps applications. I will also share my findings.

Arios Jules, Marko Karanikic, Chen Kai Tsai
Faculty Advisor: Jing-Chiou Liou

"EOF Program Platform (EP2)"

Sending Educational Opportunity Fund (EOF) reports to the state of New Jersey has always been a hassle for Kean University due to the time it takes to process the collected data necessary for successful generation of said report. To address that problem, we have introduced a web-based application that automates the process seamlessly. Using the system will increase productivity and will save over 90 percent of the time spent by staff to manually produce the reports.

Philip Kenny
Faculty Advisor: Daehan Kwak

"A Backend System Design for a Transportation-based Web Application"

During recent years, most users have transitioned to online (or mobile) maps. In this study, we develop a web-mining system running on the Amazon EC2 cloud to scrape traffic data from five popular mobile mapping systems. Our system architecture utilizes the microservice architecture, in which our RESTful services intercommunicate user source and destination addresses to retrieve and compare all route information across map applications. This process is conducted through sending user data as JSON data from our Node.js web-application to our Flask endpoint, then scraping and organizing route data, and finally displaying this data on our web application. Results from this study provide a solution for users to travel on the most efficient route and to reduce users' uncertainty derived from the differentiation in route results.
Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003, Students Partnering with Faculty (SpF) summer research program, Kean University

Rohan Kewalramani

Faculty Advisor: Patricia Morreale

"Swift vs. Android Studio"

This research project investigates which mobile application development language is easier to program in: Swift for iOS development or Android Studio for Android development. Each language will be evaluated to determine how it provides help for troubleshooting and debugging as well as the ease of understanding (reading) and writing code. The popularity of both languages will also be investigated, and a comparison of the number of applications in each language will be used to decide which language is more popular with app developers. The methodology of this project will include implementation examples of the two languages, Swift and Android Studio.

Eunbi Kim

Faculty Advisor: Ching-yu Huang

"Visual Analytics Using Tableau (Effects of Gross Domestic Product on Human Immunodeficiency Virus)"

As data becomes more accessible, visualization methods are needed to help make it easier to understand the information. Analyzing and visualizing data helps the data better recognize the datasets, making it easier to understand without reading datasets. Tableau is one of the most popular interactive data visualization software. By using Tableau, it is simple and easy to clean up datasets, find the correlation, and create visualization charts. Large data sets related to the gross domestic product (GDP) and human immunodeficiency virus (HIV) were gathered from open data sources. The data was cleaned up and then showed correlations between datasets with variable charts through Tableau. This project found a correlation between GDP and HIV.

Eunbi Kim

Faculty Advisor: Daehan Kwak

"Text-based Reviews and User Ratings in Movies"

Reviews have a significant value as they are directly linked to motivating purchases. After watching a movie, many users leave an online review on platforms, such as IMDb, which have influence on the market. Reviewers can input two types of reviews, user-rating and texted-based reviews. Sentiment analysis is concerned with the analysis of emotions and opinion from text. In this research project, both text-based reviews and user ratings are collected for top-rated movies to analyze the correlation. The sentiment values are then statistically compared to the numeric user ratings using a correlation test. Movie reviews include emotional language, and this sentiment analysis can help express the movie reviewers' feelings about the movie.

Eunbi Kim, Devon Smart

Faculty Advisor: Ching-yu Huang

"Mobile GIS Application"

One of the most common problems encountered when traversing campus is navigation. This project's goal is to create an application to offer convenience for users in need of navigating the campus. With this app, students and guests should be able to efficiently find locations and events around campus without the hassle of constantly asking for directions. The Java programming language and the Android Studio Integrated Development Environment (IDE) will be used to develop an application to utilize Google's application programming interface (API) and multiple software development kits (SDK). Having these features along with the interactive map will allow students and guests to skillfully navigate campus with less effort.

Mohammad Kutaish

Faculty Advisor: Patricia Morreale

"JavaScript vs. Swift"

This research project poster discusses the similarities and differences between JavaScript and Swift, two programming languages. The history of these two languages and how they were developed is comparatively presented. What was the main purpose of each of these languages? How are they both holding up today, and what are the languages being used for? This project outlines the main differences between the two languages and identifies the pros and cons of each language, while discussing how the differences may affect programming and language efficiency.

Vatanak Lavan

Faculty Advisor: Ching-yu Huang

"A Study on the Association Between Computer Languages and Research Papers"

The ACM and IEEE online digital libraries are famous collections of all works published by the ACM and IEEE in their articles, magazines and conference proceedings. This study investigates the association between the type of computer language and the number of research papers published in the ACM and IEEE systems. Five programming languages — Java, Python, PHP, SQL, and JavaScript — were used as search keywords. In addition, data was also collected for combinations of each programming language with two different fields — Data Science and Cybersecurity. The search results were analyzed and presented in charts and graphs. This study provides important insight into which computer languages are most prevalent in research all around the world.

Innocent Lawani

Faculty Advisor: Jean Chu

"Security Vulnerability of Internet of Things (IoT)-Based Smoke Detector"

The Internet of Things (IoT) is the internetworking of physical devices that are embedded with systems that consist of sensor, actuator, and network connection devices that enable this object to connect to a wireless network. The network connectivity ability of the IoT device enables the user to control, monitor, operate and upgrade/update this device remotely. This provides advantages, such as real-time, remote, and convenient use, which has resulted in improved accuracy, efficiency and economic benefit. This made it gain worldwide acceptance and use. This also made users' personal information able to travel the highways of the World Wide Web (WWW), which brought about concern of the security of users' information as they traversed the web.

Christine Laygo

Faculty Advisor: Ching-yu Huang

"Developing a 3-Tier Architectural Web-based Application for Genomic Sequences"

Homologous sequences are the shared functions between DNA or protein sequences. Tools, such as BLAST, calculate the statistical significance and similarities of the sequences. In this study, a web-based text-mining application is developed to compare the similarity scores of amino acids between the user's input to the values in the database. An application is developed based on a three-tier architecture, which separates the database, user interface, and database server. The data are randomly chosen from the pseudomonas genome database. The user can view statistical charts, select features to filter out options and create a table for the output scores. Ultimately, the three-tier architecture approach organizes the primary roles for each structure.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Christine Laygo

Faculty Advisor: Patricia Morreale

"An Examination of the Advantages in a Functional Program"

This project focuses on the major advantages of functional styles in programming languages, such as modularity, composability, immutability, and the use of semantics. Two different implementations of a quicksort algorithm are written imperatively and functionally in Python. Although Python is an imperative language, it incorporates functional programming styles, as well. Both implementations sort a large set of integers. The two implementations are examined after they conclude to identify which factors make the algorithm functional or imperative and compare semantics and execution times. The execution time of an algorithm is measured by importing time. Ultimately, understanding the techniques of functional programming can improve productivity.

Melissa Lowles

Faculty Advisor: Mira Franke

"Raspberry Pi Plex Server"

I used a Raspberry Pi 3B computer, installed with both Raspbian and the Plex media Server Application, to create a media server with an external hard drive for storage. I set up this media server to be able to stream both movies and TV shows through my remotely connected devices. My workspace included: a Raspberry Pi computer running Raspbian, the original Raspberry Pi Operating System, an external hard drive for media storage, the Plex Media Server application, and my MacBook laptop. The Plex ran on my devices as expected. Additionally, the Plex software organized media on the console with features including trailers, screenshots, and cast information.

Brandon Mahipat

Faculty Advisor: Patricia Morreale

"Visual Languages and Their Efficiency"

As the world evolves, computer coding becomes more and more prevalent. The job market for coders is ever expanding, and no one could have ever predicted this career. However, learning coding is not necessarily an easy thing. While some languages are easier to grasp than others, it is not clear how coding can be easily taught. Visual languages used for education can be thought of as a way to understand computer languages that are not visual-based. Through testing and research, it can be shown that visual languages do indeed help learn coding. Alice and Scratch are the two visual-based language programs that were analyzed, and from this research I came to the conclusion that visual languages can help in understanding coding conventions.

Rachel Matzel

Faculty Advisor: Patricia Morreale

"Programming Our Way to Better Health"

This research project will examine software programming languages used for health care devices that allow health care to span globally. The choice of a programming language when building software may be overlooked by programmers; however, when dealing with health care devices and networks, it is an important consideration. The choice of the programming language used in software could determine the quality of health care for those in the health care system or those who may not have direct access to healthcare providers. There will be examples of how programming language choice has an impact on health care, including Electronic Health Records (EHR) and telehealth services. The aim of this project is to determine what programming languages work best for health care.

Erick Morales
Faculty Advisor: Patricia Morreale

"Python or R for Data Analysis?"

Data science is a growing field involving techniques for taking large amounts of data and processing, analyzing and drawing meaningful insights out of the data. Most data is either unstructured or semi-structured. Advanced algorithms and tools are needed to interpret the data fully. By using programming languages, such as Python, Java, R, Scala, etc., researchers can make use of huge amounts of data and work to improve, store and possibly predict future trends. This research project examines two languages, Python and R, and determines which language is suitable for data analysis.

Kyle Murfitt, Eumbi Kim, Devon Smart
Faculty Advisor: Ching-yu Huang

"Analyzing Tweets for Cybersecurity"

Twitter is a popular social media platform where users create status messages called tweets. This research intends to capture the sentiments of tweets, understand what words strongly correlate with cybersecurity, identify the patterns of cyber threats, and uncover connections between the users who tweeted and their human expressions. We focus on developing models and approaches to identify cybersecurity terminology and identify patterns of cyber threats in tweets. We classify text and determine whether a tweet is neutral, positive, or negative. Tweets related to cybersecurity comprise the data utilized as the training set, which helps us study related terminologies and patterns concerning cybersecurity in social media.
Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

Syed Fahad Nadeem
Faculty Advisor: Ching-yu Huang

"Database Development on the Web Using MongoDB and NodeJS"

MongoDB is a document-oriented, No-SQL database management system. MongoDB uses JSON objects as schemas instead of the traditional column-row schemas seen in relational databases. This study looks at the full installation, setup, and configuration of a Mongo Database, as well as the database design and implementation from both the frontend and backend of a system. The features of MongoDB will be explored using NodeJS, which is a JavaScript runtime that is used to execute JavaScript code outside of the web browser. A previous project built on NodeJS that implemented MySQL will be used to allow for a comparison of both relational and non-relational database software. Both implementation and database design were considered when exploring MongoDB.

Patel Shailly Navinchandra
Faculty Advisor: Ching-yu Huang

"Visualization of Suicide Data"

As data becomes more accessible, visualization methods are needed to make understanding and a clear vision about information. By using visual elements such as graphs and charts, it is easier to see and understand the trends and outliers in data. This project includes large sets of data explaining the number of suicides in different countries based on environmental facts and different activities. The tool used to analyze and visualize the collected data is Tableau, which is a software program that is used to transform data into dashboards. Big data has been found from "Kaggle." Tableau helped to research which country had the highest rate of suicides each year, including reasons behind suicides, gender, etc. Tableau presented different types of graphs to show results with better visualization, including bar charts, histograms, and other charts. Suicide results indicate that Russia has the highest suicide rate in comparison to other countries, with the age group of 35-54 years old committing more suicide than other ages. Also, when comparing male and female suicide rates, there were more female suicide cases than male cases.

Darshankumar Nayee, Parth Patel
Faculty Advisor: Kazi Zunnurhain
"Assessing Vulnerability on Several Operating Systems in Google Cloud Platform"

The goal of this study is to measure the vulnerability on OS using Cloud platform. We chose cloud platform to assess the OS because cloud popularity is increasing these days. By the end of 2020, its popularity expected increase by 22 percent from the current market. Security is a concern for all the services hosted by the cloud services. Also, we will try to assess the strongest OS based on performance. We plan on using GCP to assess a few OS, including various tools, such as Microsoft server, RedHat, Ubuntu, and Debian though GCP VM. We will launch malicious attacks on different OS to breach the security system of the victim machine and attacks will be from mild to severe.

Marina Nessim, Nisha Dhar
Faculty Advisor: Daehan Kwak

"Patient Health Management System"

The healthcare industry is a multibillion dollar business and because of this, healthcare stakeholders do not see it as a basic need any more. This is due to the fact that there is no standardized format of healthcare treatment and prescription because there is no data to forecast the outcome of treatments with medication. These are some of the reasons for a need to centralize the repository for the patient health records, which can also be used for research purposes to further improvement in healthcare delivery. Response to patient care and treatment in a timely fashion is another key factor in healthcare delivery. This system is also designed to address that and to improve the speed of healthcare delivery.

Daniel Niedzwiedzki

Faculty Advisor: Daehan Kwak

"Guiding Mental Health Issues Through Chatbots"

Nearly one in five U.S. adults lives with a mental illness. Despite the support of community resources and care services, these individuals are challenged on how they navigate through these resources and services. This research consists of three main parts. First, a decision tree is constructed and used to identify the individuals' needs of resources and/or healthcare. Second, a chatbot is developed and the decision tree is implemented into it, which will act as a virtual assistant. The chat bot will then ask additional questions and create a personalized output that will be displayed to the user. Data is anonymously collected and based on this data, care managers and healthcare planners have access to statistical description for future use.

Daniel E. Ojeda

Faculty Advisor: Daehan Kwak

"Study Smarter: An Academic Tracker System"

Students spend a lot of time creating a semester schedule, calculating the GPA they will need to maintain or improve, figuring out what classes they need to take, and tracking homework assignments. In this research, we implemented a web application that provides solutions to semester scheduling, GPA calculation, course planning, and assignment tracking. Users can plan courses based off prerequisites and Spring/Fall offered courses as well as enter different grades in the GPA calculator page where they can see what grades they will need to maintain or improve. Users are also able to create a semester schedule and print it. Moreover, users will be able to link Blackboard calendar with our website, so that they can manage their time more efficiently.

Amber Owens

Faculty Advisor: Ching-yu Huang

"Visualizing Spotify Data with Python and Google API"

For this project, data visuals were created using data from the music streaming app, Spotify. The overall goal of the project is to design interactive data visualization using JavaScript, HTML, CSS, Excel, Python, and 3rd party API. For the first set of visuals, Google charts were used. Google charts allow users to create simple charts, such as line graphs and pie charts using JavaScript. The dataset "Top Spotify Tracks of 2018.csv" has 16 columns and 100 records. The visuals will answer the questions: "Which artists have the most songs on the top 100" and "What may be the reason why." From utilizing the dataset, the top 5 artists with the most songs of the top Spotify tracks list were found. Furthermore, what may be the reason why these artists may be successful based on Spotify's audio features was concluded. It can be concluded that successful artists have songs with a high danceability rating.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Parth Patel

Faculty Advisor: Ching-yu Huang

"An Interactive Web Design"

In this study, an interactive website was designed and developed in HTML (the Hypertext Markup Language), CSS (Cascading Style Sheets), and JavaScript. This project gave an opportunity for students to research basic web technology by developing a website. Several layouts and interactive methods were explored and 4 main components were designed. HTML and CSS were used to design static web pages and JavaScript was used to design the interactive functions. The project was incorporated with API that uses the client's Internet Protocol (IP) addresses to retrieve the client's local weather information and display the information on the browser. In addition, the website allows users to interact with several projects, email forms to contact the author, and view an embedded pdf file. This website can be extended to included more interactive projects in the future.

Research supported by: U.S. Department of Education, First in the World, Research Active Mentor (RAM) program, P116F150028

Joe Pauker, Umaid Ali Khalid

Faculty Advisor: Ching-yu Huang

"Number of Uber Rides in Relation to the Weather and Average Wage"

Uber, a company that started as an on-demand ride hailing service, has grown to an increasingly popular form of transportation in consumers' lives. This research will investigate one niche area of client services and human habits, whether there is a correlation between the amount of Uber rides per day versus the weather conditions, and average wages in the state of New Jersey. Data mining methods will be utilized throughout the research in several ways. First, to extract New Jersey weather records from National Oceanic and Atmospheric Administration data sets. Average wages, categorized by zip code, will be retrieved from the United States Census Bureau. Finally, Uber usage statistics will be collected through an Uber Developers account.

Kevin O. Perez

Faculty Advisor: Ching-yu Huang

"Interactive Web Design"

The primary focus of this study was learning the flow and structure of backend and frontend languages in web technology and build an interactive website. This project was to research the web programming languages, as well as to explore how to design interactive web pages. The information contained on the web page would also be used to present the researcher's portfolio and projects. The projects within the web page would allow the users to interact with them through different ways, such as gathering their geo-information and presenting them their weather information, playing against a basic AI incorporated using the backend. Using these high programing languages, we incorporated our ideas from code to a visual representation, which allowed for the website to be personal, as well as interactive.

Wenxl-Gwynne Pua
Faculty Advisor: Feng Qi

"The Design and Implementation of a Mobile App for Nature EMA Study"

In order to investigate nature's therapeutic functions on promoting mental health, an ecological momentary assessment (EMA) is being conducted to collect data on participants' perceptions of their surrounding environment and related psychological responses. The essential tool for data collection is an interactive mobile application we developed on the iOS platform. The app integrates GPS positioning with an interactive questionnaire. The user may take the survey as many times as they want and submit the survey to a server when completed. The web server handles the network traffic, processes the data, and inserts it into a database. This poster discusses the app design in terms of user interface, technical considerations, and future work.
Research supported by: Foundation Faculty Research Award, Kean University Foundation

Noel Rivera
Faculty Advisor: Mira Franke

"Website Building on a Raspberry Pi Computer"

For this project, I will use a Raspberry Pi computer to create a website in three stages: website 1.0, website 2.0, and website 3.0. For website 1.0, I will use HTML and different CSS codes in order to set up the web page. I will control how it looks by adding pictures, maps, and/or video. I will make lists, as well as create links and add pages. By making a menu bar, I will navigate through my website. For website 2.0 and website 3.0, I will work in my existing HTML/CSS code to make an improved website and gain more control over how the page looks. I will organize pages and design some themes with an individual style. Also, I will adjust the size, adjust the animation, and add new effects.

Jose Rodriguez
Faculty Advisor: Daehan Kwak

"A Web-based Decision Tree Application for Care Managers"

Mental health is an essential component of public health. Individuals with mental illness may also experience addiction to alcohol or other drugs. In recent years, the world has become more aware of mental illness problems and the potential that exists to make progress in mental illness. There are existing solutions such as a care manager, experts who work with people to identify needs and goals and to locate services that improve health and well-being. In this research, we develop a web-based application with decision trees options in safety, food, housing, and transportation that will guide care managers through a decision-making process embedded in a best practice framework, enabling them to address the needs and serve these individuals.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Ralph Ruiz, Anibely Torres, Evan Weinman
Faculty Advisors: Jenny Li, Yulia Kumar

"RN Chatter Bot"

We are presenting updated features of a machine learning application, called RN-chatter bot with the "Radius of Neighbors" algorithm. There are methods that enable machines to predict possibilities of certain situations, an example of which is inductive learning that uses training data to predict various outcomes. Another example is the decision tree learning method that goes from observations of an item to conclusions about the item's target value, represented in leaves. The neural network is a main method of machine learning. It is able to make predictions; however, it is also very important for it to learn in a way that it receives actual tasks to generate appropriate outputs.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Patryk Sasinowski, Daniel Niedzwiedzki
Faculty Advisor: Ching-yu Huang

"How Performance Affects Popularity in the NBA and Beyond"

This research will measure a player's overall performance in correlation with their popularity on twitter. It will also predict how well a player will perform in the following season. A program will be implemented to gather player's stats throughout the season. Twitter will be used to track player's mentions one-hour prior, during, and one hour after the game. Once the data is gathered and normalized, the information should show a correlation between the performance and the player's popularity on Twitter. Alex Caruso from the Los Angeles Lakers will be used for this research. Alex's in-game performance will impact his following on Twitter and how actively he is mentioned on Twitter while he is playing.

Matthew Seesselberg, Fangzhou Ye, Brian Yao
Faculty Advisor: Ching-yu Huang

"Box-Office Performance Dustry, a Movie's Success is Usually Weighed Based on the Rating and the Profits Generated Compared to Social Media Opinion"

In the movie inat the box-office, both of which correlate to each other. Platforms exist to measure ratings, which take submissions for ratings from viewers and journalists. However, while ratings and the box-office weigh heavily into measuring success, there may be other important features that can be linked to a movie's performance. Real time feedback and opinions, such as those found on social media, could be used to observe how successful a movie is by determining the correlation between tweets and overall performance of movies. In this research, we will utilize data mining to find a correlation between social media opinions and a movie's success.

Kevin Tapia

Faculty Advisor: Daehan Kwak

"A Virtual Chatbot Assistant for Aiding in Substance Abuse Disorders"

Today, as the need for substance abuse prevention programs surpasses availability, there needs to be a way for users to reach out to these services, no matter what time or if there is availability. There are still many challenges to be faced when trying to have a virtual assistant be effective and viable. However, in this research, we have implemented a virtual assistant using decision tree algorithms to make it intuitive for users to utilize. Then, the chatbot also makes use of the user's output and displays results that are personalized to them. Lastly, data is collected anonymously for further analysis on the effectiveness of the virtual, as well as to check what details are missing that are needed to further help the users.

Kevin Tapia, Syed Fahad Nadeem

Faculty Advisor: Ching-yu Huang

"Creating a Social Media Platform on NodeJS"

With companies like Netflix, Uber, and many more using NodeJS to run their servers, we wanted to explore this popular tool to create a social media website. NodeJS is a JavaScript runtime environment, which allows for JavaScript to be run outside of the web browser. Using Express.js for routing and handlebars for rendering webpages, we can create dynamic websites using NodeJS and JavaScript. Using the MVC development model, we were easily able to implement MySQL to create dynamic data. Using Node, we were able to use an external API to send a request and handle the responses via our NodeJS. We conclude that NodeJS is a very powerful tool, no matter what kind of application you are trying to make.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Suneth Tissera, Melissa Yataco, Jessica Bernard

Faculty Advisor: David Joiner

"Developing a Tool for Viewing Confocal Microscope Data in Virtual Reality"

A tool has been developed using Unity 3D to view and count features in data stored as stacked images and applied it to counting fruit fly stem cells in confocal microscope data in Virtual Reality.

Chen Kai Tsai

Faculty Advisor: Jing-Chiou Liou

"Analysis and Comparison of Parallel Sorting Algorithms"

Nowadays, modern CPUs are multicore processors and the number of the cores in it is still increasing. However, computing power brought by these cores will not automatically improve the performance of any program in our computer. They have to be parallelized. This research will first introduce the sorting algorithms we chose and analyze them theoretically. Then, it will introduce the OpenMP, MPI and Hybrid OpenMP/MPI. Finally, we will show the that the results involve three different sets of implementation and environments. To show the results, we will draw charts in each set to compare the performance of the algorithms. In addition, we will introduce and measure the scaling performance on algorithms in each set.

Evan Weinman, Ralph Ruiz, Anibely Torres

Faculty Advisors: Yulia Kumar, Patricia Morreale

"A Comparison of Learning Outcomes: C# vs. Java"

In this research, the programming language C# is investigated to determine if C# is a good first language for students just learning to program. Java is widely used as a first language for students in many schools. This research will examine how C# might coexist with Java as an option for beginners majoring in computer science or information technology. The student research team will learn the C# language and compare the pros and cons of C# to their prior knowledge of the Java language, as it is used in applications. Research questions include whether C# is a more accessible language to new beginners, whether C# is an easy language to learn after knowing Java, and which language offers more resources to its user.

Brian Yao

Faculty Advisor: Wai Tak Wong

"A Note on Predicting Delivery Capability in Iterative Software Development"

In this study, we conducted an analysis on the machine learning features provided by the paper "Predicting Delivery Capability in Iterative Software Development" (Choetkiertikul, 2015). Those features are extracted from several public software development projects, which are managed JIRA project management software. Our research objective is to regenerate a new set of story-point-based features instead of issue-based features. Using issue-based features, such as the number of issues in an iteration and the number of issues added and removed, are biased because those values do not reflect the extent for the features. For example, a difficult issue cannot be equated with a simple one. Also, they do not reflect the initial baseline for each Sprint.

Tao Yao

Faculty Advisor: Ching-yu Huang

"Sentiment Analysis of Trump's Twitter Content as a Predictor of Exchange Rate in US-China Trade War"

Since March 2018, a well-known trade war has taken place between the United States and China. Based on the Twitter content of current US President, Donald Trump, this project analyzes the content of his Twitter content. From 03-01-2019 to 09-11-2019, we have 7482 Tweets archived from Donald J. Trump's Twitter account. We use latent Dirichlet allocation (LDA), which is a model that can give the theme of each document in the set as a result of the probability distribution. Then we use SPSS Partial correlation analysis to find the possible relationship among the period, currency rate, and Twitter contents. This project attempts to explain the potential impact of social media on the exchange rate from a new perspective. In the future, we can analyze the current results based on other impact factors, such as the industry sale or bilateral trade data, to draw more meaningful conclusions.

Tao Yao

Faculty Advisor: Wai Tak Wong

"Using Machine Learning to Track the Progress of a Software Development Project"

In this study, we analyzed the machine learning features provided by the paper "Predicting Delivery Capability in Iterative Software Development" (Choetkiertikul, 2015). The goal of our research is to regenerate a new set of story-point-based features instead of issue-based features. In the machine learning area, we'll use several different models instead of just one, such as Random Forest Classifier, SVM Classifier, and Linear Regression, working together as a single set. As a result, this can provide us with more useful information about tracking the progress of a software development project and provide important information to determine whether a scope change proposal should be allowed.

Tao Yao, Yuwei Zhou, Chenchen Zhang

Faculty Advisor: Jing-Chiou Liou

"Voice to Sign-Language Translator (VSign) on Mobile Device Application"

Sign language is a visual language used by deaf people as their mother tongue. Unlike sound patterns conveyed through speech, sign language uses body language and manual communication to smoothly convey human thoughts. According to the data from the World Health Organization, there are 466 million people in the world with disabling hearing loss. These people also have the right to communicate with hearing people. A translator between them can solve a lot of problems. We decided to use this project to provide information, access, and services to people who are deaf in American Sign Language on mobile phone-based Android and iOS platforms.

ENVIRONMENTAL AND SUSTAINABILITY STUDIES

Joe Affinito

Faculty Advisor: Mark Yuschak

"The Monarch Butterfly Migration"

One of the most astounding features of the monarch butterfly is its incredibly unique migration pattern. Monarchs that live in the eastern portion of the United States and Canada undergo an incredible migration annually; almost the entire population of monarchs will travel southwards towards Central Mexico on a journey that is almost 3,000 miles long, all completed in only one generation. No other butterfly species in the world goes through migration as intense and arduous as the monarch.

Joe Affinito, Mohamed Khalifa, Danielle Pomponio, Sarah Sarantopoulos, Deborah Ramos, Jessica Hatcher

Faculty Advisor: Daniela Shebitz

"Groundwork Elizabeth's Microfarm at the Elmora Library"

Working with Groundwork Elizabeth, we plan to collaborate with the non-profit organization in making improvements to the microfarm established behind the Elmora Library. Our primary focus is to assist in the establishment of a rain garden and pollinator habitat on the premises, as well as to develop methods for controlling excess stormwater runoff. As cities continue to grow towards the focal point of all human activities, it is crucial that we, as budding environmentalists, maintain pace with this growth rate. Groundwork Elizabeth's vision for this microfarm is to invite the community of Elizabeth to be a part of a sustainable urban agricultural movement. We are working to build a small, fully functioning farm to give the community access to fresh produce, even in a densely populated urban area.

Katelyn Bryant, Justine Burnett

Faculty Advisor: Dongyan Mu

"Life Cycle Assessment of Industrial Production of Heterotrophic Microalgal Oil at a Commercial Scale"

A life cycle assessment was conducted to evaluate the environmental impacts of bio oil produced from heterotrophic microalgae Chlorella protothecoides and Schizochytrium. An autotrophic comparison was also conducted with Chlorella sp. in raceway ponds. Results showed the impacts of oil produced by heterotrophic Schizochytrium were lower than autotrophic Chlorella sp., whereas, the biofuel produced from heterotrophic Chlorella only had lower impacts than the autotrophic Chlorella in acidification, eutrophication, carcinogens, and ecotoxicity. The algal fermentation stage accounted for 86 percent of total impacts. The harvest stage of heterotrophic algae caused fewer impacts than autotrophic algae due to high biomass density and oil content in algae.

Research supported by: Research Recruits program, Kean University and PSE&G

Justine Burnett, Maura De Palma
Faculty Advisor: Juyoung Ha

"Geoheritage: A New Paradigm for Valuing and Conserving Natural Resources"

Considering the current state of degradation of our environment, many researchers have investigated ways in which we can preserve our resources. Some such resources fall under geoheritage, sites or geologic features that carry scientific, educational, cultural, or aesthetic value and therefore must be conserved. Cultural and aesthetic forms of geoheritage are especially important in that they have an added economic value, oftentimes acting as tourist destinations that boost local and regional economies. By travelling to Siena, Italy, we will be able to use field surveys and economic analysis to identify the value of natural resources in the region from various time periods, and apply this perspective and technique to New Jersey's resources.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780, Students Partnering with Faculty (SpF) summer research program, Kean University

Bayron Carrillo
Faculty Advisor: Jonathan Parker

"Nuclear Power Opportunity Cost Compared to Others"

This study will examine input and output of resources of renewable energy, how it affects the surrounding area where the renewable resource is collected and extracted, and the amount of wildlife impacted to these resources and human health.

Mary Clark, Chaqeem James
Faculty Advisor: Dongyan Mu

"Life Cycle Assessment Incandescent and LED Light Bulb Comparison"

The purpose of this essay is to assess and compare incandescent light bulbs to LED light bulbs. This assessment was conducted through a life-cycle analysis program called Simapro. Simapro provides a detailed evaluation of items, materials, and resources used to assemble, transport, and utilize these light bulbs and its environmental impacts, shedding light on more environmentally friendly options to use to increase sustainability and decrease ecological footprints.

Sol Condo
Faculty Advisor: Jonathan Parker

"Animal Agriculture and Climate Change"

Among the issues surrounding climate change today, animal agriculture is often overlooked as one of the serious contributors to our environmental problems. Through this research project, I am looking to evaluate the environmental ramifications of animal agriculture and how we could lessen those negative effects if it were either eradicated or reduced to a degree.

Sevana Cordero
Faculty Advisor: Eunice Nkansah

"A Study on the Effectiveness of College Recycling Programs in the U.S.A"

This study focused on evaluating the effectiveness of college recycling programs. The study attempted to quantify how college students' opinions on environmental initiatives affects their likelihood to recycle. The study also adopted a quantitative study approach to develop a clear understanding of how students impact their school's recycling program. An online survey was distributed to randomly selected participants via Google Survey. The results of the survey revealed that college students recycle on campus frequently, despite finding that not all of them are entirely environmentally conscious. The study further reported that students' understanding of environmental initiatives did not show a proportionate impact on their reported recycling habits. The study concluded that multiple factors contribute to the effectiveness of college recycling programs. Further research was recommended.

Sevana Cordero
Faculty Advisor: Daniela Shebitz

"The Use of Smoke-Water and Ash Treatments for Germination Acceleration of TurkeyBeard Plants"

This study seeks to determine the effectiveness of smoke-water and ash treatments in the germination of turkeybeard plants (Xerophyllum asphodeloides) collected from the Pine Barrens in New Jersey. The study's methodology has been adapted and modified from Shebitz, Ewing, & Gutierrez's (2009) observational study on beargrass. Before planting, seeds will be soaked in either smoke-water or distilled water depending on its treatment group for 24 hours. Then, the plants will undergo a cold stratification for 0, 6, 8, 10, 12, or 14 weeks. The researchers will employ quantitative methods to determine the success of the experiment. Conclusions will be made based on the number of turkeybeard shoots observed in each treatment group weekly.

Rachele Cort
Faculty Advisor: Jonathan Parker

"Designing for Ethical Production: An Approach to the U.K. and Abroad"

My project is about the relationship of ethical production to the values of workers who abide by codes of conduct. This research revolves around the consideration of local resources and how environmental designers are sustaining our communities with these resources. How can designers encourage ethical production that also supports and values people and skills? This is about design that utilizes and invests in traditional craft skills in the U.K. and abroad. It is about ethical production, which supports and values workers rights, and the sourcing of fair trade materials. It questions what ethical production means, and how it differs for each scale of production and manufacture.

Olivia D'Agostino
Faculty Advisor: Jonathan Parker

"Environmental Ethics for Outdoor Activities"

Everyone enjoys the outdoors and participating in outdoor activities, such as hiking, sailing, etc. However, we have to acknowledge how to respect our environment when participating in such outdoor activities. Especially in today's world, we have to do our best to act respectfully and sustainably when we are outside. This research examines how we should act doing specific outdoor activities and how many people really do.

Rachel Dash, James Duhamel, Samantha Hosey
Faculty Advisor: Juyoung Ha

"Biochar Effects on Soil Health and Plant Growth"

During this study, we measured the effects of biochar on soil quality and plant growth. Soil collected from agricultural areas in the NJ Pine Barrens was used in both control and experimental groups. Three control and twelve experimental batch reactors were measured for baseline nitrogen, potassium, phosphorus, and pH. The effects on soil quality and plant growth of varying biochar to soil ratios were examined in the experimental groups. The growth of each plant and the soil quality were measured weekly for six weeks. The results of this experiment will provide fundamental data on the effects of biochar on soil quality.

Emily Davis
Faculty Advisor: William Heyniger

"Food Compost and Flowers: A Sustainable Solution to a Growing Problem"

Food Waste, insecurity and justice are growing global issues affecting numerous societies. This research utilizes food-based compost and a popular annual flower, the marigold, to determine the best potting ratio of soil and food-based compost. It will provide a sustainable pathway using food-based compost in agriculture to increase germination, survival, and overall plant vitality. Growth may help solve these expanding anthropogenic issues. Various soil/compost ratios with a consistent seed pattern were researched to determine the effects that food-based compost has on plant germination, plant vigor, and plant biomass. The research hopes to expand knowledge that food-based compost can be a sustainable and viable contribution of solving food waste.

Maurizia De Palma, Christopher Diange, Zack Fuimo, William Murawski, Macey Williams, Donell Davis, Abigail King, Justine Burnett
Faculty Advisor: Daniela Shebitz

"SESS Capstone: Using Biochar to Remediate the Harrison Avenue Landfill in Camden, New Jersey"

The SESS Capstone Project is a major mile-marker for all students involved. Students are assigned real-life clients to observe a real-life problem and design a feasible solution. This project is partnered with Dawson Eco-Contracting and will focus on the northern portion of the Harrison Avenue Landfill/Cramer Hill Waterfront Park Project located in Camden, New Jersey. Currently, the Northern Conservation Area is polluted with heavy metals. We propose biochar, burned organic material with high carbon content, will have a high success rate with heavy metal adsorption. Three soil samples will be randomly taken and analyzed to study the pH, total nitrogen, total phosphorus, and chromium heavy metal levels before and after being treated with biochar.

Maurizia De Palma
Faculty Advisors: Daniela Shebitz, John Krasting

"Regional Patterns of Carbon Uptake and Ocean Acidification in GFDL's CMIP6 Models"

Ocean acidification (OA) has physical, biological and economic impacts. Historical and future carbon uptake and OA simulations were performed with GFDL's ESM4 and CM4 models. There are similar patterns of carbon uptake and OA, but differences in the Southern Ocean, subtropical North Atlantic, Indian, and Pacific basins. pH decreases in the North Atlantic and Arctic basins with shoaling of aragonite saturation. Under the SSP5.85 scenario, the corrosive Arctic surface water's percentage increases from 10 percent to near 100 percent by 2100. "Regimes" of OA were identified using an unsupervised machine learning algorithm based on pH, SST, and SSS. With high carbon emissions, changes in OA will occur around 2050, particularly in the Arctic and Atlantic basins.
Research supported by: National Oceanic and Atmospheric Administration (NOAA)

Maurizia De Palma, Karolina Sawicka
Faculty Advisor: Joseph Sarnoski

"Monthly Water and Soil Analysis on Trotter's Creek in Elizabeth, New Jersey, and Kean University"

Urbanization and pollution rates have many effects on the surrounding natural environment, especially with the salting of the roads in the winter. In Elizabeth, New Jersey we measured the pollution rates of Trotter's Creek using chemical analysis through water and soil tests of both the benthic and surrounding soil. Samples were collected once a month from February to April upstream at Peerless Beverage Company, midstream at Kean University, and downstream at Phil Rizzuto Park. Nitrogen, phosphorus, and potassium levels were measured for both the water and soil tests in addition to the flow rate, pH, and temperature of the stream. This analysis determined the impacts local urban environments have on aquatic and soil systems.
Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Zack Fuimo

Faculty Advisor: Daniela Shebitz

"Mortality in Watchung Reservation Conifers Planted by the Civilian Conservation Corps in the 1930s"

In an effort to provide unemployed men with work during the Great Depression and to promote the conservation of nature, Franklin D. Roosevelt initiated the Civilian Conservation Corps (CCC) in 1933. The CCC planted more than three billion trees in just 9 years, with the Watchung Reservation located in Union County, New Jersey being one of the many locations. This independent study will evaluate the mortality of conifers planted by the CCC at multiple sites in the Watchung Reservation. The data collected will analyze the different conditions of the conifers and offer insight into possible causes of any unhealthy trees. The results could provide the framework for any future research pertaining to conifer mortality.

Login T. Generals

Faculty Advisor: Jonathan Parker

"Marine Pollution"

What are the damages and effects of marine pollution? Marine pollution is a combination of chemicals and trash, most of which comes from land sources and is washed or blown into the ocean. This pollution results in damage to the environment, to the health of all organisms, and to economic structures worldwide. The importance of this from an Environmental Ethics approach is that we can attempt to determine who may be morally responsible for marine pollution, their contribution to marine pollution, and ways to change and prevent marine pollution.

Jessica Hatcher, Danielle Junio

Faculty Advisor: Feng Qi

"A Study of Food Accessibility Within Native American Tribal Nations"

Native Americans, African-Americans, and Hispanics of all ages were noted to have type two diabetes rates drastically increase in recent years with respect to other ethnicities in the United States. These are also the ethnicities of people that are most likely to live in food deserts. Food deserts are defined as geographic areas where access to affordable, healthy food options are limited or nonexistent because of the lack of proximity to grocery stores. This project looks to examine the food production and supply in the Navajo Nation, Cherokee Nation, and their surrounding areas. By integrating geospatial data from multiple sources, we hope to construct a proper understanding and visual representation of the differences in food access.

Jacqueline Hernandez

Faculty Advisor: Jonathan Parker

"The Life Cycle of Cell Phones"

The poster will highlight the entire life cycle of cell phones and its impacts on the environment.

Lauren King

Faculty Advisor: Cailin O'Connor Fitzpatrick

"Avian Window Strikes at Kean University, Union Campus"

Avian window strikes account for an estimated one billion bird deaths per year worldwide. Tall buildings with many large windows account for the majority of avian mortality by window strike. College campuses often have many such buildings and several local campuses are known to have high avian mortality due to strikes. The Kean University campus in Union, New Jersey, was monitored daily for bird mortality due to window strike over three migratory seasons: Fall 2018-19 and Spring 2019. Only three window strikes were noted, suggesting that the buildings at Kean Union do not pose an undue hazard to birds.

Megan Klutts

Faculty Advisor: Mark Yuschak

"An Energy Analysis of a Late 1800's Fire Station in Belmar, New Jersey"

According to recent statistics presented by United Nations Environment Programme (UNEP), buildings account for 40 percent of global energy use, 25 percent of global water use, 40 percent of our resources, and 60 percent of global electricity use and emit 1/3 of our greenhouse gas emissions, which makes buildings the largest contributor of greenhouse gases out of any other sector. This research aims to identify the energy inefficiency of a historical firehouse located in Belmar, New Jersey that will address its historic property and its ability to increase its energy efficiency due to applying newer building standards and methods that promote energy efficiency and sustainability.
Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Megan Klutts

Faculty Advisor: Dongyan Mu

"LCA of Interior Wooden Doors and Metal Doors"

Life cycle assessment is acknowledged to be an efficient tool to establish a product's environmental profile and is extremely useful in identifying and analyzing impact assessments of a product. The concept of integrating environmental aspects into industrial practices has become a necessity. However, there has not been many life cycle assessments conducted on wooden and metal doors. This study explores the cradle-to-grave environmental profile of an interior wood door and interior metal door in the United States. The results showed that the main contributor to the product's impact is the production of raw materials of both wooden and metal doors, with metal doors having a higher product impact than wooden doors.

Megan Klutts, Joe Affinito, Holly Keown

Faculty Advisor: Cailin O'Connor Fitzpatrick

"Bird Banding of Native, Migratory Birds in the Meadowlands Environmental Complex, Lyndhurst, New Jersey"

This project involved recording avian species migrating through the Meadowlands in the fall of 2019. The number and types of birds recorded expanded the understanding of the biodiversity at the Meadowlands, a landfill historically polluted with mercury and other toxins. Mist nets were used to catch birds from Sept-Nov 2019. Each bird's weight, wing cord, age, sex, and fat content was recorded and each bird was banded with a unique identification number. The data was entered into a software program, BandIt, and submitted to the Bird Banding Laboratory to store at the USGS central database. This data expresses characteristics of the avianof the Meadowlands location. Ongoing banding efforts will be used for statistical analyses.

Megan Klutts, Diana Londono, Joseph Tumfour, Andrew Diaz, Jade Guzman, Emily Davis, Karolina Sawicka, Dareinis Medrano

Faculty Advisor: Dongyan Mu

"LEED v4: Flatiron Building"

The Materials and Resources (MR) credit category focuses on minimizing the embodied energy and other impacts associated with the extraction, processing, transport, maintenance, and disposal of building materials. The requirements are designed to support a life-cycle approach that improves performance and promotes resource efficiency. Each requirement identifies a specific action that fits into the larger context of a life-cycle approach to embodied impact reduction. These credits and requirements will be associated and applied to the Flatiron Building Project if appropriate.

Alexander Kong

Faculty Advisor: Juyoung Ha

"A Look into Brazil's Atlantic Rainforest"

This particular study was conducted to better understand the variety of fauna and functionality of the vegetation present in the Atlantic Rainforest. To answer these two questions, we took a firsthand account through daily hiking and journal recordings of what we, as a group, observed along the various trails. We were able to conclude through wet vs dry seasonality that the ecology would directly affect the fauna, plant growth, flowers produced, and fruits produced. This data can help present and future conservation efforts in restoring the environment.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Gabriella Lentini

Faculty Advisor: Jonathan Parker

"Ethics of Entertainment Use of Animals"

Are zoos, circuses, horse races, and rodeo events ethical for animals? Does it cause them pain? Is their pain equal to human pain?

Yanique Leslie

Faculty Advisor: Daniela Shebitz

"An Urban Farming Project in Elizabeth, Highlighting Micro Farms and Hydroponics"

This project provides an overview on community development in Elizabeth, NJ that emphasizes sustainable agriculture and experiential education. Groundwork Elizabeth is a non-profit organization that involves school children in growing organic fruits and vegetables, while teaching about the importance of fresh food to human and environmental health. This research investigates the best practices in urban agricultural systems, documenting those crops that grow effectively using micro- farming in raised beds or by hydroponic (water-based) systems. In addition, the educational aspects of Groundwork Elizabeth's approach to agriculture are documented, including volunteer recruitment, age-specific curricula, and community food donation programs.

Yhulieanna Marquez

Faculty Advisor: Juyoung Ha

"Analyzing the Organic Contaminants, Biphenyl and Phenanthrene, Against Gram Negative Bacteria"

Polycyclic Aromatic Hydrocarbons, or PAHs, are a major issue today due to improper ways of burning certain materials. Coal, gas, and garbage are a few causes of these cytotoxins released into the environment. These cytotoxins (toxins that attack cells) will be measured by their effect on gram negative bacteria. Organic compounds tested against the bacteria are biphenyl and phenanthrene, which are commonly used today, to monitor how the cytotoxins damage cellular growth. Biphenyl is used for food preservatives and overall organic syntheses, while phenanthrene develops cholesterol and steroids. Research conducted will assist in understanding high levels of biphenyl and phenanthrene's potential toxicity in microbial communities, for future health risk solutions.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Jolie Martinez-Landa

Faculty Advisor: Jonathan Parker

"Chernobyl Disaster: Radiation and Its Effects"

On April 26, 1986 nuclear reactor number 4 exploded at the Chernobyl Nuclear Power Plant, exposing the surrounding area to radiation, which killed 4,000 innocent lives over a period of time. Although that is the story of what happened that day, what I will be discussing is how radiation has impacted the flora, the fauna, and the lives of the people who live nearby ground zero more than 30 years later. We will explore why and how the plants and the surrounding wildlife continue to survive and thrive, along with how the people of the area have managed to continue to live, despite the looming risk of radiation poisoning that threatens their daily lives.

Dareinis Medrano, Yhulieanna Marquez, Abigail King

Faculty Advisor: Toby Michelena

"Testing the Efficiency of Filter Removal of Particulate Matter and Bacteria from the Wen Rui Tang"

The Wen Rui Tang river in Wenzhou, China is very visibly polluted. The color and lack of movement indicate that there is an apparent problem with the overall quality of the river. As of now, the most commonly known pollutant in the river is very fine particles of clay that wash down into the river from the mountains that surround the city. The clay buildup is sustained in the water and prevents light penetration, which could lead to a lack of ecosystem development in the river. This current research project is a portion of a larger river revitalization project. The project aims to find an eco-friendly and sustainable way to properly remove most of the particulate matter and bacteria that is polluting the river.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780, U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Dareinis Medrano, Daniela Mendes

Faculty Advisor: Mark Yuschak

"Analysis of Sustainable Methods to Reduce a Residential Home's Energy Consumption"

LEED certification focuses on improving the efficiency of resource use in buildings. This research will focus on the specific energy consumption of a residential home, using EnergyStar online software to review the energy consumption from the appliances, heating/cooling system, water usage, etc. The test conducted will provide statistics on a home's overall energy consumption based on the residents' daily routines. The analysis focuses on understanding how residents can reduce their energy consumption through minor home remodeling and altering daily routines. This research can provide a general guide for homeowners to understand how to reduce their energy consumption and save money at the same time.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Daniela Mendes

Faculty Advisor: Cailin O'Connor Fitzpatrick

"MAPS Station to Open at Kean Skylands"

Monitoring Avian Productivity and Survivorship (MAPS) was started by the Institute for Bird Populations in 1989 and now has over 1,200 stations operating and collaborating across North America. MAPS stations collect data on the abundance and breeding success of native bird species. This information is important for monitoring changes in bird populations and is especially important in this time of massive global bird population declines. The purpose of this study is to establish a MAPS banding station at the Kean Skylands campus in Oak Ridge, New Jersey, to begin operations in May 2020. Program tasks involve permit applications, equipment purchase, site selection and maintenance, data management, and daily station operations.

Yalianis Mendive

Faculty Advisor: Jonathan Parker

"Deforestation: More Malls, Less Air"

This poster will bring awareness to the importance of the preservation of trees. It will make clear that less trees equals less oxygen and fewer lives. The main purpose of this poster is to open people's eyes to what's going on around us with regard to cutting trees and how this affects all of us.

Abel Morais

Faculty Advisor: Jonathan Parker

"Living Near an Active Volcano: Examination of Kilauea"

When living near an active volcano, there are risks and benefits to doing so. The risks and benefits are usually examined from a scientific standpoint, but not in all cases are scientific finds used to determine one's actions. When examining Kilauea, an active volcano located in Hawaii, there is more to understand than just scientific findings. To understand why an eruption of Kilauea is a joyous occasion to the residents of Hawaii, we will need to look at the Hawaiian religion and social ecology.

Gina Moretti, Destiny Morot

Faculty Advisor: Elizabeth A. Manheim

"Analysis of the Mps1-PP1 Interaction In Vivo"

Meiosis and mitosis rely on bipolar spindle formation to segregate chromosomes and complete cell division successfully. Many of the Drosophila spindle assembly mutants, including Protein Phosphatase 1 (PP1-87B) and monopolar spindle-1 (mps-1), are embryonic lethal or exhibit high levels of chromosome nondisjunction. Previous work has shown that mutating the PP1-domain in Mps1 in vitro results in the mutant phenotype. This project investigates the role of mutating the PP1-domain in Mps1 through an engineered mutant construct of K(231)VLF to AVLA mutation. Injected embryos are analyzed for germline integration and to rescue embryonic lethality/nondisjunction phenotypes; this analysis will better understand the integral role of Mps1 in vivo.

Peter Mukuna

Faculty Advisor: Kikombo I. Ngoy

"Impact of Air Pollution on Human Health"

Air pollution has a negative impact on human health. The impact is likely to be higher in a very industrialized and densely populated state, such as New Jersey. I selected some data from particular sources, analyzed the trend of these pollutants over several years, and used a geographical information systems (GIS) to generate continuous data for the entire state. Point data related to human health from CDC and NJ hospitals were collected. I hypothesized that the concentration of some human sickness will be related to the concentration of some pollutants. The findings will allow health organizations and facilities to forecast expected cases while concurrently allowing environmental agencies to bolster regulations that hold emitters accountable.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

William Murawski, Deborah Ramos

Faculty Advisor: Dongyan Mu

"Life Cycle of Straws"

Impacts of plastic can be observed in the environment throughout the globe. Propylene gas is extracted through standard oil extraction and then refined. Fossil fuels and electricity are used as primary energy sources, resulting in the cradle of raw materials unsustainable in process. Alternative materials are being used in place of plastic in order to minimize environmental impacts. Examination between metal and plastic straws were conducted through the SimaPro program to assess which material is more sustainable. The following two different types of materials were used: stainless steel and polypropylene plastic. In this study we found that stainless steel metal straws are more sustainably impactful than polypropylene plastic straws.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Olivia Nobre-Portela

Faculty Advisor: Jonathan Parker

"How Captivity Affects the Environment"

This poster will examine how people taking animals from their natural habitat affects the natural environments from which those animals were taken.

Kevin Christopher Ortiz

Faculty Advisor: Jonathan Parker

"Water Usage and Its Effects"

In this poster presentation, I delve into the importance of water conservation, while also studying the conscious and unconscious use of water in the general public. My research consisted of an online survey sent to the student body of Kean University. In this poll, I ask questions pertaining to the individual's water usage in daily tasks and their knowledge of our planet's rapidly depleting supply of said resource. Along with this field research, I will be citing and discussing other works within the academic journals of Environmental Ethics and other academic sources in order to clearly and purposefully deliver the most concise presentation of information possible.

Krishna Patel

Faculty Advisor: Jonathan Parker

"Hybrid Cars: Environmentally Safe and Economically Effective?"

The purpose of this study is to gain further insight on how accurately hybrid cars display the benefits claimed by society. Hybrid cars are fuel-efficient and greener, but are these benefits really worth the drawbacks such as high market value prices and battery replacements? Is it significantly environmentally efficient? Through a qualitative and quantitative study design, the researcher compares the amounts of energy consumption and emission levels not only from cars, but also in producing the materials needed for cars. Overall, results indicate that hybrid car batteries and engines require additional resources, such as copper and nickel; if the world were to go through a mass conversion, the cars would need more nickel than the Earth even holds. However, hybrid cars would be greener for the environment if the materials used come from secondary, recycled sources rather than primary, raw sources.

James Salins, Sarah Sarantopoulos, Victoria Rekemeier, Jenine Sarni, Clara Miranda, Chris Diange Michael Heuser, Venise Louis, Rachel Dash, Syisha Thomas

Faculty Advisor: John Wnek

"The Conservation of Diamondback Terrapins Project"

The diamondback terrapin is a turtle that inhabits salt marshes across the east and Gulf coasts of the United States. Terrapins can only survive in their estuarine habitats; however, coastal areas are the most developed locations across the country. As a result, terrapin habitats are being compromised, leading to a decline in terrapin populations. Coupled with other anthropogenic threats, including drowning in crab pots and road mortality, terrapins are becoming more vulnerable in many areas throughout their range. Enhancing nesting habitats, reducing abandoned crab pots, and becoming more active in road mitigation projects may help to increase terrapin populations in some areas. Awareness of terrapins is key to the efforts of this project.

Research supported by: Project Terrapin LLC

Karolina Sawicka, Maurizia De Palma, Danielle Junio

Faculty Advisor: Dongyan Mu

"A Comparative Life Cycle Assessment Analysis of Polypropylene and Stainless Steel Straws"

Large amounts of evidence relating to plastic waste show that plastic is starting to have a rapidly increasing negative impact on our environment and human health. Many large corporations are aiming at replacing their plastic straws with reusable straws. This project will conduct a life cycle assessment of plastic and stainless steel metal straws in order to determine the total inputs, outputs, and environmental impacts of both straws. Simapro software was used to obtain the data and charts to individually analyze each type of straw and then compare the two. This assessment focuses on the global warming potential and carcinogen impact, since they can directly measure human and aquatic health. It is recommended that consumers stop the use of plastic straws.

Holly Schwing

Faculty Advisor: Daniela Shebitz

"Analysis of 20 Medicinal Plants Used to Treat Cardiac Disease Across the World"

Modern medicine utilizes numerous synthetic and electronically manufactured drugs, yet 65-80 percent of the world's population uses traditional medicine as their primary type of healthcare service. This research provides an in-depth look into 20 different plants that are used to treat heart disease across the globe. Published information about indigenous populations, culturally traditional groups, and smaller communities without access to western pharmaceuticals will be analyzed to understand routines of managing and healing a patient suffering from heart diseases. The breakdown of these plants and naturally grown remedies will be presented, helping to develop a clearer understanding of how holistic medicine can treat and potentially cure cardiac diseases across the globe.

Joseph Tumfour, Karolina Sawicka

Faculty Advisor: Dongyan Mu

"A Life Cycle Assessment of Lettuce Production in a Hydroponic Farm in New Jersey"

Hydroponic farming is a commonly practiced technique to confront the challenges of fresh food shortages in urban areas by improving food independence and resilience in cities. Increasingly, the economic, environmental, and health benefits of hydroponics are drawing the attention of people who are concerned with sustainable agriculture across the world. While the technique has many features that can reduce impacts on soil, water, and ecosystems, there are still concerns over the materials used, electricity consumed, and the water pollution introduced that may cause negative environmental impacts. This project conducted a life cycle assessment (LCA) to evaluate the environmental impacts of lettuce and bok choy production in a commercialized hydroponic farm.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Stella Vera-Garza, Rachel Dash, Daniela Mendes, James DuHamel, Griffen Hurt, Samantha Hosey, Jeremy Johnson

Faculty Advisor: Dongyan Mu

"Proposal for Neptune's Riverview Court Coastal Resilience Park Project"

The main goal of our project in Neptune's Riverview Court is to design a coastal resilience park. The main objectives that we would like to accomplish with this coastal resiliency park are: managing stormwater, increasing biodiversity in the park, and providing recreational space for the community. The design of the park incorporates berm and bioswales installation and rain gardens to lessen the detrimental impacts in the community brought on during coastal storms. The recreational area will be constructed with community interest in mind to ensure the persistence of this project's success. Once properly constructed, Riverview Court Resiliency Park could become a model for more resiliency parks in surrounding townships.

Stella Vera-Garza

Faculty Advisor: Sylvio Codella

"Pollinator and Predator Diversity at Nomoco Activity Area, Turkey Swamp Park, Monmouth County, NJ"

Species richness of hymenopteran predators and pollinators was assessed at the Metedeconk trailhead, Nomoco Activity Area. Plant composition was dominated by Liquidambar styraciflua and Pycnanthemum muticum, with grasses, sedges, and allies from the order Poales also well-represented. Three sampling methods were used for nine 4-m2 quadrates sampled within a well-defined rectangular 3,655 m2 area. Overall, hymenopteran species richness was 17, with the following diversity indices: Reciprocal Parker-Berger = 9.5, Shannon = 2.79, and Simpson = 0.95. Analysis of the species accumulation and evenness curves suggests that most species in this community remain undocumented; thus, further sampling is justified.

Stella Vera-Garza, Sarah Sarantopoulos, Debra Ramos

Faculty Advisor: Juyoung Ha

"Qualitative Study on Naphthalene Cytotoxicity"

As PAHs become a staple in our daily lives, cytotoxins have become a prevalent concern. Exposure to PAHs may cause cytotoxic effects. In this study, influences of cytotoxins on its environmental surroundings will be qualitatively assessed by bacteria. Naphthalene will be tested against gram-E. coli to represent a model microbial community to evaluate how PAHs are cytotoxic to cellular growth. We expect naphthalene cytotoxicity to have significant consequences on the gram-cell. This study will help determine quantifiable levels of naphthalene required to become cytotoxic in E. coli. Knowing the optimal density of naphthalene's cytotoxicity on cellular growth allows for better preventative measures to help reduce adverse environmental risk.

John Whalen

Faculty Advisor: Jonathan Parker

"Causes and Complications of Freshwater Being Added into the Ocean"

Fresh Water is being dumped into the ocean at record numbers. This is due to the significant melting of the polar ice caps. In this project, I will be looking into the reasons for the melting of ice and the resulting addition of freshwater into the ocean. I also will highlight potential consequences of this occurring. Much of the population is unaware of the potential environmental disasters that could occur if this continues and why, if left unchecked, it will become a snowball effect on the environment and especially the weather. This is an important issue to address because unlike some other aspects of global warming, these consequences will occur during our lifetimes.

Kersyn Wood

Faculty Advisor: Jonathan Parker

"The Ethical Impacts of Vernacular Architecture"

The focus of this research revolves around the ethical benefits that arise through the use of locally sourced materials for building structures. The topic relates the class, Introduction to Environmental Ethics, to my own area of study, Architecture, and ultimately allows me to gain knowledge that can be used in my work past my studies. It is important for us as humans to take care of and respect the land we occupy, and thus understand the impacts we have on it when building on it.

MATHEMATICAL SCIENCES

Asja Alic

Faculty Advisor: Jiantian Wang

"Microarray Data Analysis Using R"

Genomic data, or microarray data, is a typical data in gene expression. In this work, we will use R software to demonstrate the microarray data analysis for some real gene data. We will conduct visualization and interpretation of the data which will help in gene product identifications.

Akbar Bayor, Evelyn Kesseh

Faculty Advisor: Kung-Kuen Tse

"Polya's Theorem on Random Walk on the Plane"

A random walk is a stochastic process studied extensively in mathematics. Poly theorem states that in a two-dimensional random walk on the plane, with probability one, one always returns to where one starts. We use computer program to verify the statement.

Nicole R. Curia

Faculty Advisor: Raymond Viglione

"Perspective on Perspective Geometry"

During the 15th Century, Italian artist, Leon Battista Alberti, first published a method for drawing a tiled floor in the correct perspective called the costruzione legittima (legitimate construction). The construction utilized a familiar property of parallel lines that becomes apparent when we look at a road that disappears off into the distance; even though parallels don't intersect, they appear to get closer and closer together until they "meet" on the horizon. This leads us to a surprising geometric construction known as a projective plane, where any pair of lines must meet. We explore and motivate the axioms for a projective plane, show that such a strange mathematical object actually exists, and discuss its relevance to drawing.

Brian Demcher

Faculty Advisor: Kung-Kuen Tse

"Comparison of U.S. Mathematics Education and European Asian Mathematics Education"

Even though mathematics is a topic covered by everyone in the world, school systems must begin to create a priority of the way that it is taught in schools. The United States of America, China, and Finland are producing some of the best mathematics test scores, according to the PISA, utilizing very different methods of instruction and classroom setups and environments. This paper will discuss the wide variety of instruction that each of the three countries are utilizing, as well as how each country compares to one another based on PISA test scores. Also, the attitudes and feelings of students throughout these countries will be addressed as they are impactful to how their classroom and school's schedules run.

Rebecca Hilliard, Nayanna Evans

Faculty Advisor: Louis Beaugris

"LaTeX Graphics and Their Codes"

In this project we used LaTeX codes to produce graphics and images. We used LaTex packages such as Tikz, graphics, graphicx, and animate to create images such as clouds, houses, shapes, and even animations. Some of these codes were from open source codes that we modified.

Jingyi Huang

Faculty Advisor: Jiantian Wang

"Predication of Stock Market Using R Programming"

In this study, we will investigate some stock prediction models to predicate the future returns of the Dow Jones Industrial Average by using R programming. It will describe a variable calculated with the quotes data that can be seen as an indicator (a value) of the tendency in the next k days. We will use our knowledge in statistics and R skill to analyze the performance of those models.

Jingyi Huang, Xintong Chen

Faculty Advisor: Wolde Woubneh

"Multivariate Analysis of Variables PM2.5, O3, PM10, CO, and NO2 on the Incidence of Asthma Cases in NJ"

NJ data on the incidence of asthma cases (2000-2018) as it relates to PM2.5 (μm/m^3), PM10(μm/m^3), O3, CO, and NO2 levels is analyzed to develop a multivariate model. The data analysis shows that while PM2.5, PM10, and O3 are positively correlated with childhood asthma prevalence, CO and NO2 are negatively correlated with childhood asthma prevalence. The multivariate analysis relating childhood asthma prevalence as a function of air pollutants such as PM2.5, CCl4, CH3CHO, and HCHO shows the air pollutants account for 74.18 percent of the variation in childhood asthma incidences. The model was significant at p-value =0.0314 level. Similar data analysis studies for adult cases shows that CCl4, CHCl3, and HCHO are positively correlated with the asthma incidences and account for only 7.4 percent of the variation.

Samanta Jackson

Faculty Advisor: Raymond Viglione

"Exploring Cauchy Induction"

Undergraduate students typically encounter only the most basic version of mathematical induction, where one statement implies the next, much like a domino rally. However, there are other, more arcane, types of induction. Here we demonstrate a form of induction known as "Cauchy induction," which can be imagined as a strange domino rally, where a sequence of particular dominos fall forward, skipping infinitely many dominos, which dominos then fall backwards. To illustrate this interesting technique, we prove the Generalized Arithmetic Mean — Geometric Mean Inequality.

Tingzhu Jiang, Jie Shen, Jianxiong Zhao, Jiacheng Xu

Faculty Advisor: Mahmoud Affouf

"Recommendation System and Trends in Movie Genres"

We apply the Principal Component Analysis to investigate the genre trends in movies using Netflix, big datasets of movies, and user ratings. Visualization of trends and recommendation systems are presented.

Benjamin Kamen

Faculty Advisor: Louis Beaugris

"On Near-Rings and Their Central Orthogonal Idempotents"

In this project, we further study some properties of near-rings, constructed from the rings of integers Zpq, with central orthogonal idempotents. We will prove some general results about the structure of these near-rings.

Molly Lasko

Faculty Advisor: Louis Beaugris

"Results on the Golay Codes"

The purpose of this research is to further investigate linear codes. In particular, this research will focus on the Golay Codes, G23 and G24 . The methods used in this research are gathering previous findings, using knowledge in abstract and linear algebra, and comparing these well-known codes. The results of this research will help further answer why Golay Codes are "good codes," as well as how effective there are as far as parameters such as length, size, and Hamming distance are concerned.

Shane Pastori, Christina Joseph

Faculty Advisor: Neva Lozada

"Kean University Supplemental Instruction (SI) 2018-2019 Report"

Supplemental Instruction (SI) is a free, peer-facilitated academic assistance program designed to help students succeed in traditionally difficult courses. This poster is focused on explaining what SI is, and surveying its effects on student performance in high D, F, and withdrawal SI-supported courses at Kean University between Fall 2018 and Fall 2019. Based on our findings, we found our overall visits increased by 368 percent, the average number of visits per student increased by 40 percent, students who attend more SI sessions tend to gain higher grades compared to students who attend fewer sessions or none at all, and 89 percent of students who attend SI sessions describe them as very or extremely helpful.

Yue Pan, Yue He

Faculty Advisor: Wolde Woubneh

"Multivariate Model for Determining How Low Birth Weight (LBW) is Affected by the Prevalence of Mothers with Gestational Diabetes and Percent Premature Births of Diabetic Mothers"

According to the recent report published by the CDC, there are 30.5 million adult diabetics in the United States, accounting for 9.4 percent of the total population, and 2 million of them could become pregnant at any time. Although the United States has made some progress in the field of diabetes treatment and prevention, the number of people who are suffering from diabetes is high. Preliminary data analysis shows that the prevalence of diabetes is related to preterm birth and race of the mother. In this study, the scope of the data is extended to include four races in four different states. The result shows that variables like percent of premature White babies, percent of Black mothers with gestational diabetes, percent of Asian mothers with gestational diabetes, percent of premature Black babies, percent of premature Hispanic babies, and percent White mothers with gestational diabetes contribute the most to the percent of low birth weight in the United States.

Vinay Patel, Dhruv Parikh, Shaliy Patel
Faculty Advisor: Kung-Kuen Tse

"Using Computer Simulation to Compute European Call Option Price"

Call options have been used in finance to speculate and reduce risk. Simulations have been used extensively to compute the European Call Options price. We use the computer simulation method to compute the Black-Scholes call option price.

Amaris Vasylyschuk
Faculty Advisor: Dongyan Mu

"Improving Sustainability through Composting and Waste Management"

This report presents the benefits of the direct impact of in-vessel composting on humans, the ecosystem, and resources in the environment at Kean University's Union Campus. The indirect effects benefit education and the environment. One of the major impacts on the environment is a reduction in greenhouse gas (GHG) emissions. Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), and Nitrous oxide (N20) have all been reduced by in-vessel composting.

Jeremy Volin
Faculty Advisor: Louis Beaugris

"On Prime Numbers"

Since the early days of recorded mathematics, divisibility of numbers has always been of high importance. Mathematics was solely practical and divisibility was often used for distribution of food and goods among people and workers. Considering the lack of understanding of pure mathematics, problems faced were quite impactful. For about a few thousand years, we've studied these numbers deeply, naming these 'non-divisible numbers' as prime numbers. In modern times, rather than prime numbers being an obstacle, they have instead posed a challenge of finding large primes, all while trying to prove their primality. In this project, we study the history of prime numbers, primality testing, and Mersenne primes.

Teng Wang
Faculty Advisor: Wolde Woubneh

"Statistical Data Analysis of Men and Women Soccer Game Goals Achieved by Kean University Soccer Team"

The research concentrated on determining a probability model of the soccer goals achieved by Kean University men's and women's soccer teams. A frequency of soccer goals achieved by the men and women soccer teams were collected for years 1972 to 2018 (men) and years 1983 to 2018 (women). Next, a plot frequency of goals as a function of number of goals achieved was conducted. Our research revealed that the frequency distribution was in fact a Negative Binomial function. Our next task was to estimate the parameters p and r of the Negative Binomial Distribution. In addition, the graphical plot comparisons of the frequency distributions of the data as a function of goals achieved every ten years reveal a match with the Negative Binomial function. The main goals achieved were plotted as a function of time factor.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

NATURAL SCIENCES

Adesewa Adesina
Faculty Advisor: Sasmita Mishra

"Evaluation of Antimicrobial Properties of Commonly Used Fruits and Herbs"

The safest way of controlling pathogens is always challenging. The use of antibiotics often causes adverse effects to human health and there is a pressing need of plant-based antimicrobial compounds. In addition to great taste and flavor, fruits and herbs are rich in antimicrobial compounds. In this study we are evaluating the antibacterial properties of some commonly used herbs and fruits. Antimicrobial properties were tested by disc diffusion assay measuring the zone of inhibition on Tryptic Soy Agar plates cultured with Escherichia coli, Staphylococcus, and Enterococcus faecalis. Results obtained from this study will help us to screen various plant parts with antimicrobial properties as a potential alternative to antibiotics.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Ernest Afoakwah, Alyssa LaBoy, Kirollos Basta, Julia Annuzzi
Faculty Advisor: Maria Shumskaya

"Analysis of Saproxylic Fungi Diversity from Princeton Woods, NJ"

Saproxylic fungi inhabit dead wood and mostly serve as decomposers. The present research focuses on analyzing saproxylic fungi surveyed in Princeton, NJ. We utilized both DNA barcoding and metabarcoding techniques to identify the fungal species. The protocol for fungal species identification included several steps. First, DNA was isolated from either a single fungus or a mix of fungi. Next, PCR was performed to amplify ITS region. PCR bands were observed under UV, purified, and transported to an external lab for either Sanger or NGS sequencing. Finally, the nucleotide sequence of samples was sorted with reference database using BLAST by NCBI or SCATA. The results were used to generate a list of identified species.
Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Serwaa Akese-Martins

Faculty Advisor: Sharmistha Das Iyer

"How Stress Affects Human Health"

Stress is a familiar part of modern day lives and this affects one's health each and every day. Although it is essential as a fight-or-flight response to challenges one faces in day-to-day life, this natural reaction has certain physical effects on the body. This study aimed to explore how stress affects young adults and college students. The researcher sent out an online survey to over 100 individuals of which fifty-one individuals responded. Results showed that stress actually affects human health both physically and mentally and the researcher came to the same conclusions that other medical researchers had shown in their previous studies. More research should be done in order for people to know and understand ways to manage and prevent stress so that everyone would live a balanced and healthy life.

Shanice Allen

Faculty Advisor: Nicholas Lorusso

"The Effects of Natural and Conventional Skincare Treatments on Skin Microbiome Species"

Modern epidermal prescription treatments can do more harm than good to the human skin microbiome by disturbing the delicate environment microbes require. If the concentration of a given treatment solution contains enough reactants to cause the decrease of acne at the cost of microbiome health, the treatment may actually be counterproductive. My project evaluates the different effects on skin bacteria exposed to prescribed, over the counter, and holistic treatments. Results of 16s sequencing and colony identification will identify differences in the effects of these treatments. This experiment has the potential to show if prescription treatments may be more harmful when symptoms are mild and if patients should consider less invasive options.

Julia Annuzzi

Faculty Advisors: Maria Shumskaya, Matthew Mongelli

"Analysis of Phellinus tremulae Secondary Metabolites with HPLC-UV and LC-MS"

Phellinus tremulae is a polypore saproxylic fungus that is known to be avoided by fungi-eating insects. Whether this greater resistance is due to a possible chemical deterrent or a stronger structural integrity is unclear. In order to test the hypothesis that P. tremulae contains chemical insect repellents, 70 percent ethanol extracts were prepared from tissues of this fungus. Related species tissues, as well as the fungal substrate quaking aspen were used as controls. Samples were initially analyzed by HPLC-UV with chromatograms obtained and compared. Through a collaboration with Lehman College, CUNY, the samples were analyzed with LC-MS. Possible metabolites of Phellinus tremulae with pesticide activity are discussed.

Kenna Atienza, Diana Ludizaca

Faculty Advisor: Carisa Davis

"Transmission of E. coli Through Toilet Seats"

Microbes are found on all kinds of surfaces, but not all are pathogenic. Some of the public is concerned about the transmission of pathogenic microbes in the bathroom, and the purpose of this project was to investigate the transmission of bacteria from the toilet seat to skin. Escherichia coli strain K-12 was applied to the toilet seat and different methods were used to see which was the best way to prevent the transmission of bacteria to the skin. E. coli strain K-12 was identified in samples using the differential media, Eosin Methylene Blue agar, and PCR. It is expected that cleaning the toilet seat prior to use will be the most effective method for stopping transmission, and that using a paper barrier will not stop the transmission.

Oreoluwa Awoleye, Stephanie Rangel

Faculty Advisor: Maria Shumskaya

"Popular Science Summaries: A Hypothetical Study on Their Effectiveness in Educating the Public"

Education in basic sciences is important, not only for specialists, but also for the general public. Evidence-based research provides valuable data; however, not everybody can understand scientific jargon. The National Scientific Board reported only 63 percent accuracy rate of basic scientific questions for Americans in 2016. We suggest a study using an existing Facebook page BioShorts, designed for biology senior seminar students to practice popular scientific writing, to check if "simplified" summaries of original research papers would provide education for public comparable or better than the papers themselves. A Test of Scientific Literacy Skills is suggested to survey the reader's ability to identify valid scientific arguments, evaluate the sources, etc.

Eve Bell

Faculty Advisor: Matthew Mongelli

"Investigation of Native New Jersey Macroalgae for Use in Biofuel Production"

Land crops used as biofuel feedstock create a strain on our land and water resources. Marine plants have been shown to be a promising alternative to current feedstocks because they free up land use for commercial agriculture, and do not place strain on usable water resources. This project will investigate techniques for extraction of lipids from native New Jersey macroalgae, the transesterification of the lipids into fatty acid methyl esters (FAMEs), the subsequent identification and quantification of FAMEs produced, and optimal fermentation conditions for the dry biomass. The two-step process of extraction and transesterification is effective for obtaining biodiesel from native macroalgae, and the product can be characterized by GC-MS.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780, U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Marcus Blanc

Faculty Advisor: Nicholas Lorusso

"Reducing the Effect of Carcinogens by Promoting Skin Microbiome Health"

The human skin microbiome is made of hundreds of bacterial species that help protect the skin. The central aim of this research experiment is to determine if these species can be protected from harmful compounds scientists used in laboratories. Carcinogens have a negative impact on human health, but this negative impact can be magnified for bacterial species. I plan to test if holistic preventative elements can counteract and limit the negative effects of carcinogens on skin bacteria. Results of 16s sequencing and colony identification will identify whether holistic treatment may help protect these crucial species. Overall, this work has the potential to help protect and inform scientists who work with harmful compounds in the lab.

Christina Marie Bowden, Dana Sudol

Faculty Advisor: Adrianna Tagliaferro

"Social Influences on Learning Vocalization in Birds"

Ornithology is a branch of zoology that specializes in birds. Humans have been studying birds since prehistory. Just like birds, humans also learn how to vocalize during juvenile states. When influenced by a parent, our learning is enhanced; similar studies have found this in song birds. Juvenile birds typically learn their songs at a young age by their father. In this independent research paper, we investigate how songbirds need social influence from their parents to learn vocalizations.

Cheynya M.J. Brimley

Faculty Advisor: Patrick Field

"Travis Kauffman vs. Mountain Lion: How an Instinctual Response to Danger Saved a Man's Life"

This historical case study provides a narrative of a cougar attack that Colorado native, Travis Kauffman, was able to survive. The objective is to examine the Sympathetic Nervous System response and other variables that resulted in Travis' being able to defend himself against such a dangerous predator.

Lisneidy Caba, Greyssi Reyes, Melany Ramos

Faculty Advisor: Nicholas S. Lorusso

"Too Big Too Fast? The Effects of Bovine Growth Hormone (BGH) on Cow Gut Microbiota"

Gut bacteria in ruminants are a very important part of digestion and growth in species such as cows. Farmers introduce hormones to cows to increase cow growth for low-cost beef production, but the addition of these treatments might disrupt gut bacterial communities. This project aims to determine if seemingly helpful hormone treatments may actually be harmful to growth. I observed cow gut bacteria after culturing in experimental conditions with and without bovine growth hormones. Results of 16s sequencing and colony identification will identify differences in the bacterial community. If the bacteria in from a cows stomach is impacted by hormone treatment, digestive health might change due to differences in nutrients provided by bacteria.

Christopher Calvache

Faculty Advisor: Kim Spaccarotella

"Evaluating Lunch Bags to Determine Food Safety Guidelines"

Lunch bags are recommended for keeping food consumable for a few hours during the school day. This experiment evaluated four lunch bags to determine if they keep food safe following The United States Department of Agriculture's (USDA) food safety guidelines over 2 hours or more. Four lunch bags were assessed each with a sandwich, 1 cup of vegetables, and ½ cup of sliced fruit in plastic containers, along with 1 ice pack placed in the middle of each bag. In each lunch bag, the temperature steadily increased above 40°F over 4 hours. Recommendations to add more ice packs or place them in a different position may help consumers keep their lunches safe.

Research supported by: Research Recruits program, Kean University

Genesis Carrera

Faculty Advisor: Roxie James

"Food Allergies"

Food allergies or food sensitivities are more prevalent in today's society. In addition, an individual could be allergic to one allergen or multiple allergens at the same time. While many people have similar food sensitivities, unique differences will not allow the same treatment. Furthermore, an allergic reaction results from the binding of Immunoglobulin E (IgE) and mast cells that release histamines involved in the symptoms. There is no particular agent that triggers this immune response. However, there is ongoing research trying to find what causes a certain sensitivity in some individuals, but nothing in others. A reaction could be as small as a rash, but if not taken seriously, it could develop into chronic issues and even death.

Genesis Castillo, Anastasia Martinez

Faculty Advisor: Patrick Field

"Growing an Extra Skeleton"

Fibrodysplasia ossificans progressiva is a disorder that is not very common. It is a genetic mutation that causes extra bone formation in areas such as the neck, spine, and connective tissue. With having new bone formation in these certain areas, it causes loss or limitation of movement. This disease is often misdiagnosed for cancer, which can lead to unnecessary treatments and also cause further complications. In this case study, an eight-year-old boy was misdiagnosed, which resulted in a leg amputation that caused complications, which were fatal. This original case study brings insight into the rare condition fibrodysplasia ossificans progressiva, an educational study that can be of interest to students learning biology, orthopedics, and physical therapy at the undergraduate and graduate levels.

Carl Cazeau

Faculty Advisor: Lucas James Kirby

"Comparison of Polystyrene (Styrofoam) Biodegradation by Two Species of Darkling Beetle"

In 2015, researchers at Stanford University and Beijing University released several studies that showed a species of darkling beetle, mealworms (Tenebrio molitor), were able to consume polystyrene (styrofoam) as their only food source. The researchers further showed that the beetles converted approximately 50 percent of the styrofoam to CO2 and the nondigested waste was biologically degraded and mineralized. To expand on this research, my study compared the biodegradation ability of two species of darkling beetle: standard mealworm (Tenebrio molitor), giant mealworm (Tenebrio molitor), and superworms (Zophobas morio). Initial results indicate that the superworms (Zophobas morio) are more able to consume polystyrene and at a much faster rate.

Natasha Chiriboga, Megan Schaeffer

Faculty Advisor: Adriana Tagliaffero

"The Biology of Human Emotion"

This independent research paper discusses the biology of human emotion, including the discovery of emotions and what they are. It also explores how the brain relates to emotion and the different anatomical structures that produce these emotions. We also examine research that discusses what type of animal model is best for conducting a study on the biology of emotions.

Jamie Clapp

Faculty Advisor: Yeung-Gyo Shin

"Quantum Mechanical Calculations of Rotational Barriers for Biaryl Analogues"

Computational and modeling methods within chemistry are becoming a powerful prediction tool and an invaluable way to see the unseeable. Analogues of biaryl compounds were explored through molecular mechanics and computational quantum chemistry calculations. Relationships were then studied between dihedral angles and rotational barrier energies, including examining the contributions in associated energies relating to steric hindrance, electronic effects, and hydrogen bonding. These methods can be used to further investigate spontaneous resolution and its unique optical activity, as well as possible tunneling.

Jamie Clapp

Faculty Advisors: Heather Stokes-Huby, Ayusman Sen

"Hofmeister Series Driven Transport of Passive Tracers in the Presence of Liposomes"

The emerging field of nano-scale motors and pumps opens up the possibilities of intelligent drug delivery and collective behavior. The Hofmeister series is a classification of salt ions, which interacts with biological entities and changes their properties, such as solubility, stability, and aggregation. Transport phenomena of tracer particles using self-assembled liposomes was observed and measured with high salting out and salting in solutions. The experiment consisted of a three inlet and one outlet microfluidic channel and was then observed and recorded using a confocal microscope. This research aims to aid in optimizing further motility and catalysis studies by considering pure transport in settings similar to physiological salt conditions.

Research supported by: NSF-Research Experiences for Undergraduates (REU)

Danielle Davis, Stephanie Peralta

Faculty Advisor: Heather Stokes-Huby

"Synthesis of Novel CCR1 Antagonists for Treatment of Glioblastoma"

Glioblastoma is a fast growing, malignant tumor in the brain. C-C chemokine receptor 1 (CCR1) is implicated in the growth of these malignant cells via chemotaxis. Inhibiting CCR1 could prevent the progression and slow cell growth in malignant tumors. This research aims to synthesize potential CCR1 antagonists by coupling carboxylic acids with a triazole core. The synthesis of novel compounds were performed under ideal conditions. Recent results of these binding assays have contributed to the selection of new carboxylic acid structures for attachment. The goal in selecting new compounds for synthesis was to retain bioactivity and enhance brain penetration by decreasing molecular weight and increasing cLogP.

Saul F. Diaz

Faculty Advisor: Paul Belony

"Energy: Pyrolysis by Candlelight"

We introduced wood pyrolysis by candlelight as an alternative fuel. We designed a steel reactor to generate useful wood gas products. The chemical potential energy stored in the paraffin of a candle stick was used as the heating source of the pyrolysis process. Temperatures in excess of 300ºC were achieved and flammable syngas, tar, and charcoal were obtained and characterized. This research measured the temperature and the time for the onset of wood pyrolysis.

Nancy Marian Duker

Faculty Advisor: Roxie James

"Malaria, Genetic Immunity, and Hemoglobin Variants"

Malaria is a parasitic infection that affects people in most tropical regions across the globe. The female Anopheles mosquito transmits the parasite that moves through the victim's blood into the liver where its life cycle begins. Research shows that certain individuals in malaria regions are immune to the most deadly form of the parasite due to a defective gene in their hemoglobin. In this research study, Kean University students are surveyed to assess their awareness of malaria and knowledge of the immunity certain genetic defects in hemoglobin offer to individuals carrying the gene. Results confirmed that most students were aware of the potential dangers of malaria, but lacked profound knowledge of this potentially deadly disease.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Nancy Marian Duker, Novena Petryk-Cordi

Faculty Advisor: Sasmita Mishra

"Effects of Phosphorus Deficiency and Recovery in Tomato"

Mineral nutrient stress is widespread in horticultural crops and detection of incipient nutrient management is vital to mitigate crop damage. The objective of this research was to understand the mechanism of phosphorus (P) recovery in plants, using tomato (Solanum lycopersicum) as the model crop. Five-week-old tomato (cv. Early Summer) seedlings were treated with P-deficiency (200 µM) followed by equal duration of recovery. Plants were harvested on 3- and 10-days of deficiency and recovery (2000 µM). The treatment effects were analyzed by measuring shoot length, biomass, chlorophyll content, and concentration of phosphorus uptake protein (PHT1) in roots. Symptoms of P-deficiency were more visible with the increase in duration of treatment. As predicted, P-deficiency reduced shoot length significantly and plants were unable to recover after adding equal concentration of P similar to control. Further measuring the PHT1 protein concentration, will help us understand the P- recovery mechanism from short-term P-deficiency.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Justin Durrant

Faculty Advisor: Patrick Field

"The Dark Side of Equality: Evaluating Fairness and Equality in UFC Fighting"

Students will be tasked with comparing and contrasting the ethics & morals surrounding the issue of allowing transgender females to partake in combat sports. Testosterone and estrogen levels of the athletes are among other factors discussed. The two main objectives of this case study are: 1) to draw comparisons between the anatomical differences between men and women and the science behind transitional reassignment therapies; and 2) to encourage discussions about the complications of UFC fights between transgender and cisgender female opponents and how to achieve fairness in the sport.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Lilliana M. Geraldes

Faculty Advisor: Kim Spaccarotella

"School Gardens, Bioactive Compounds, and Nutrition"

Research has shown that incorporating nutrition, gardening, and science into the curriculum can motivate children to eat healthier and increase physical activity. However, lack of teacher nutrition self-efficacy is a barrier. The purpose of this project was to review gardening-themed preschool children's books, compare them with USDA nutrition guidelines, and pilot test a workshop to help teachers implement gardening in the classroom. Lists of popular children's books were searched to identify nutrition messages that aligned with Dietary Guidelines and could help them incorporate science with other subjects and build self-confidence in bringing STEM to their classrooms.

Aliyah Hargrove, Shanice Allen

Faculty Advisor: Nicholas Lorusso

"East Meets West: Can Traditional Chinese Medicine Promote Skin Microbiome Health?"

Antibiotics are often prescribed to treat or prevent bacterial infections, but they kill helpful skin bacteria. Commonly prescribed antibiotics of skin infections have been known to remove health promoting skin microbes. In this project, I examine a Traditional Chinese Medicine (TCM) alternative to antibiotics. I believe that TCM will cause less damage for helpful skin bacteria compared with antibiotic treatment. Results of 16s sequencing and colony identification will identify differences between treatments. TCM has grown in popularity and researchers are beginning to look into potential uses as alternative treatments in the scientific and medical world – this project will evaluate their potential for a healthier approach to treatment.

Alyssa Taylor LaBoy, Shakira Benjamin, Keid Berisha, Jacob Emezua, Zachary Gardner, Steven Huerta, Shirin Shaik

Faculty Advisor: Maria Shumskaya

"Metabarcoding of Saproxylic Fungi Communities from Franklin Parker Preserve, NJ"

Saproxylic fungi decompose wood, allowing for the recycling of nutrients, soil formation, erosion protection, and release of carbon into the atmosphere. The focus of this research is saproxylic fungi from Franklin Parker Reserve, NJ. In order to do it, metabarcoding of sawdust samples is performed. The analysis includes DNA isolation from dead wood, PCR of ITS1 and ITS2 regions unique to fungi using tagged primers, and next generation sequencing (NGS). Results from NGS were analysed through a bioinformatics pipeline to identify the fungal samples in the saw dust. These results will be published at the Global Biodiversity Information Facility (GBIF) database to establish a saproxylic fungi baseline and identify species in need of conservation.

Patrick Malinowski

Faculty Advisor: Lucas Kirby

"White Tailed Deer Herbivory on Japanese Knotweed on the East Bank of the Elizabeth River"

Japanese knotweed is an invasive plant that outcompetes many native plants. This invasive species has become such an ecological problem that the USDA is looking into a controlled release of native Japanese species to control the population. From 2004-2010, 4 species have been the focus of their study. There is minimal evidence that any native species utilizes this plant for food, even though it is edible. In this study, herbivory of white tailed deer on Japanese knotweed on the East bank of the Elizabeth River was studied. In 2018 it was noticed that there was herbivore-inflicted damage to the knotweed plants. Our results show that the native deer are in fact eating the invasive Japanese knotweed plants and significantly reducing their size.

Varsha Medidi, Christina Joseph, Rob Kidd, Alexandre Ribeiro, Janel Barbee, Zachary Acosta, Gina Moretti

Faculty Advisor: Elizabeth A. Manheim

"Investigation of Mps1-PP-1 Interaction In Vivo: Inducible Wild-type Transgene"

A bipolar spindle is required to segregate chromosomes successfully in meiosis and mitosis. Monopolar spindle1 (mps1) is a spindle-checkpoint gene responsible for monitoring kinetochore attachment to the microtubules for proper segregation by preventing a cell from entering anaphase until the microtubules are attached to kinetochores; mutants exhibit elevated nondisjunction or embryonic lethality. Previous studies have shown that Protein Phosphatase1 activates Mps1 in a vital interaction. To study how Mps1 functions, we injected 250 Drosophila embryos with a GFP-tagged mps1 under control of an inducible promoter. This poster will present the results of injecting the transgenic construct into 250 embryos and production of balanced stock lines.

Laissa Micilene Moise

Faculty Advisor: Paul Belony

"Energy: Pyrolysis by Candle Light"

The chemical potential energy stored in the paraffin of a candle stick can offer a cost-effective alternative to conventional fuel for useful energy. Using the chemical potential energy of the paraffin as a source of extraction of potential energy stored in High Density Polyethylene (HDPE), temperatures of 300 - 400ºC are achieved for complete pyrolysis of the waste plastic. This condition creates a suitable environment to thermally degrade the long hydrocarbon chains of HDPE in the absence of oxygen into smaller useful hydrocarbon fuels. Liquid fuel oil, flammable hydrocarbon gases, and solid residues are collected. This research project measures the ideal temperature for pyrolysis of HDPE and the quality of the syngas generated; overall, the energy stored in the paraffin is converted into a liquid fuel with more flexible usages.

Laura Osinski, Marie Joseph

Faculty Advisor: Maria Denise Gemmellaro

"Analysis of Unsolved Murder Rates in the US and Potential Patterns of Serial Killer Activities"

According to the Washington Post, in the past year, out of about 50,000 homicides recorded in 55 major US cities, 50 percent of them remained unsolved. Unfortunately, the rate of murders that investigators are actually able to solve has been decreasing over time. This may seem odd considering the advancements of forensic science and how these have contributed to criminal investigations. However, several sources have recorded and mapped unsolved killing in the US, highlighting the alarmingly increasing rate of unsolved murders and even potential patterns that could indicate several serial killers active in different areas.

Laura Osinski, Marie Joseph

Faculty Advisor: Maria Denise Gemmellaro

"Morphological identification of blowfly (Diptera: Calliphoridae) adults collected using baited traps"

Necrophagous insects have the ability to colonize decomposing remains (dead bodies) minutes after death and exposure. As a result, certain groups of insects can be reliably used to estimate the time of colonization (TOC) or time of death (PMI). Morphological identification of blowflies (Diptera: Calliphoridae) is an essential step of any forensic entomology analysis since different species have different developmental rates. In this research, we present the data obtained from the morphological identification of blowflies collected using traps baited with beef liver and discuss their distinct features.

Erika Perez

Faculty Advisor: Nicholas S. Lorusso

"The Effect of Combined SPF Skincare Treatments on the Health of the Skin Microbiome"

Sun Protection Factor (SPF) is advertised as an important ingredient that blocks UV rays from affecting our skin. However, recent inclusion of SPF compounds in other skincare products might harm critical skin microorganisms. The purpose of this research is to understand the relationship between SPF, combined treatments, and the human skin microbiome. Bacteria from eight participants will be used to compare the growth rates and diversity of colonies grown with and without SPF added to skin care products. Results of 16s sequencing and colony identification will identify differences in the effects of products. This research could indicate a need to be more careful when considering what treatments we expose our helpful skin bacteria to.

Melany Ramos

Faculty Advisor: Nicholas S. Lorusso

"The Effect of Organic and Inorganic Skincare Products on the Human Skin Microbiome"

The human skin microbiome serves a number of functions including promoting skin health. This experiment aims to test how organic and inorganic products influence human skin microbes. I hypothesized that adding different skincare products to human skin bacteria will change critical skin bacteria. Bacterial species were isolated and then cultured under exposure to organic and inorganic products designed to promote skin health. Results of 16s sequencing and colony identification will identify differences in the effects of products. Conducting this experiment will have a positive impact on determining whether organic and inorganic products change the type and number of bacteria in human skin.

Greyssi Reyes, Melany Ramos, Lisneidy Caba

Faculty Advisor: Nicholas S. Lorusso

"The Effect of Human Microbiome Species on the Bovine Microbiome Species"

Ruminant gut microbes are critical to healthy digestion and growth in species, like cows, but a number of factors can remove needed bacterial species from the gut. This study evaluates if humans may harm these bacteria while interacting with cattle by introducing invasive skin bacteria. I designed an experiment exposing cultured cow gut microbiota to human skin bacteria to test the prediction that human bacteria would change the cow gut microbe community. Results of 16s sequencing and colony identification will identify differences in the effects of gut contamination. Conducting this study has several positive impacts not only for livestock, but also for veterinarians and farmers interested in promoting healthy cattle growth and nutrition.

John Richichi

Faculty Advisor: Adriana Tagliaferro

"Neurodegenerative Disorders and Similarities to Prion Diseases"

The concentration of my independent research paper is on neurodegenerative disorders and their similarities to prion disease. The paper examines the genetic compositions of the disease/mutations and how they break down in the body. Some diseases mentioned in the article are Alzheimer's disease, amyotrophic lateral sclerosis, Parkinson's disease, and muscular dystrophy. I also discuss the proteins assimilated to the diseases and how they compare to the pathogenic proteins in prion disease as well.

Claudia Santibanez

Faculty Advisor: Roxie James

"Autism Spectrum Disorder: Are Vaccinations Safe?"

Immunizations have been associated with a multitude of learning disabilities and in more recent years, been linked to autism. Doctors and healthcare professionals have felt the need to abjure the connection repeatedly, due to how briskly this topic has affected new parents and their decision to vaccinate their children. Statistics provided by the CDC show infants are being vaccinated less in comparison to 2001, where only 0.3 percent were unvaccinated between 19-24 months. Healthcare professionals blame media for triggering doubt in the American population, but in 1998, a European surgeon actually associated the MMR vaccine with causing autism. Consequently, millions globally began to fear vaccinations due to the publication of this article.

MICHAEL GRAVES COLLEGE

ROBERT BUSCH SCHOOL OF DESIGN

Claudia Argueta
Faculty Advisor: Denise Anderson

"Flo: Affordable Feminine Hygiene Products"

Many young girls miss school because they are unable to afford feminine hygiene products. Research shows that 500 million women and girls are living in "period poverty" and are unable to afford the $150-300 per year on feminine products. Period poverty leads to poor menstrual hygiene that can cause physical health risks and make a girl feel embarrassed. A survey of 72 people yielded that 87 percent of females did not have access to feminine products because they could not afford them or were not provided them in school. To help girls in need, I created "Flo" a feminine hygiene product company. The purpose of Flo is to educate people about period poverty and to raise funds.

Gianna Azzinnari
Faculty Advisor: Denise Anderson

"Only One: Unique Up-Cycled Clothing"

Manufacturing clothing at high volumes has a negative impact on the environment. Research shows that the fashion industry is responsible for producing 20 percent of global wastewater and 63 percent of clothing is made from petrochemicals. The findings of a survey of 50 shoppers revealed that originality in clothing is important (78 percent) and people would shop more sustainably if they knew the impact it had on the environment (90 percent). To address this need I created "Only One," a retail website that sells one-of-a-kind pieces of clothing made from recycled fabrics. The purpose of Only One is to inspire people to shop more sustainably without the sacrifice of style.

Jillian Belda, Zoe Feuer, Catherine Circonciso, Alison Benitez, Kylie Mena, Patrycja Sliwowska
Faculty Advisor: Christopher Navetta

"Kean University Union Campus Arboreal Project"

We are surrounded by plants from the grass we mow to the houseplants we water. However, no plant is as conspicuous to us as the tree. They are towering and constant reminders that as animals, we are not alone. Plants provide the necessary oxygen for life on Earth and are a critical part of establishing and maintaining viable ecosystems. The diversity of trees on the Kean campus provides us with a living laboratory. The students/faculty/staff of the Design Studio Practicum and faculty from the SESS will identify, research, and map the distinct species of trees on the Kean campus. The creation of a print and digital booklet with augmented reality (AR) features will be supplemented with online components to promote our arboreal assets.

Samantha Beurer, Kelsey Strydio
Faculty Advisor: Robin Landa

"Spotify's #VOMO - Vote or Miss Out"

About two-thirds of 18 to 33 year olds admit to feeling FOMO, or the fear of missing out, regularly. People go vote when they know that everyone around them is doing it too. This FOMO is even applied to voting; if they see others their age going out to vote, they will do the same. One of the biggest reasons why these young people don't vote is that they don't feel connected to the political system and they feel they have a lack of education or preparation on the issues.

Pranav Desai
Faculty Advisor: Denise Anderson

"Ecoscope: Educating People About Alternatives to Plastic"

Plastics are harmful to people and the environment. Globally, 335 metric tons of plastic are produced and 6,300 metric tons are discarded annually; of this number, only 9 percent are recycled. Studies show that chlorinated plastic can be harmful to the land and groundwater because of its toxicity. Plastics in the ocean can be detrimental or kill marine life due to chemical pollution or accumulation of debris. My solution is to create "Ecoscope," a mobile app that introduces eco-friendly alternatives to plastics. Ecoscope's purpose is to educate and inform users on how to properly dispose of plastics and provide resources on where to purchase eco-friendly products.

Pranav Desai, Jessica Murray, Amanda Hernandez, Zoe Feuer, Catherine Circonciso, Zandra Aguilo, Melissa Ostrander, Danielle Thomas
Faculty Advisor: Christopher Navetta

"The Nantucket Historical Association"

The Nantucket Historical Association (NHA) preserves and interprets the history of Nantucket through programs, collections, and properties in order to promote the island's significance and foster an appreciation of it among all audiences. Design Studio Practicum students have launched a multidisciplinary initiative to research, learn, and create new material for the NHA. Students will collaborate in development of a consistent brand identity and strategy for distribution across all media. This includes visual branding, such as graphical seal and type treatment, wayfinding system (physical/digital), and experiential assets. It is the extensive research into the storied history of Nantucket that is the guiding force in the design solutions.

James Domfort

Faculty Advisor: Linda O'Shea, Alan Horwitz

"Familiar Faces: Redesigning the Ella Baker School at the Julia Richman Education Complex"

The Julia Richman Education Complex on the Upper East Side of New York City houses the Ella Baker School, a majority-minority PreK-8 elementary school. Housed within the revolutionary education complex that saw a large high school split into six smaller schools in 1995, the Ella Baker School faced challenges posed by the outdated design of the c. 1922 building. These included small classrooms, outdated facilities, and the limiting of the school's potential growth. Through a reimagining of the complex as a whole, new multi-functional spaces were created that reinforce the student-centered, community-oriented qualities that have made both the Ella Baker School and the Julia Richman Educational Complex successful for the past 25 years.

Zachary Dubits

Faculty Advisor: Efecem Kutuk

"Gym Equipment Design Project"

Our objective was to design/redesign a piece of gym equipment for workouts or for equipment storage purposes. My goal was to improve upon the "center-mass" dumbbell. These are spherical free-weight dumbbells that are generally unheard of. The issue I observed with them is that they are bigger than standard dumbbells, while still providing the same purpose. My idea was to give new life to these weights by adding extra workout options to them by altering their outer shell-design.

Nicole Duncan

Faculty Advisor: Manuel Divino

"The Chrysalis Center"

The Chrysalis Center is a transitional women's shelter for victims of domestic violence. One in four women experience domestic abuse with an intimate partner and there are over 20,000 calls per day to the domestic violence hotline. Transitional shelters act as the second stage for those seeking refuge and includes programs created to assist women in the challenging adjustment to their new independent lives. When put into a space designed for the needs of the individual, they're more likely to thrive. By researching the designs of both past and present emergency and transitional shelters, a design plan was put forth to create a space to change the stigma of shelters and positively influence the individuals within the Chrysalis Center.

Research supported by: Research Recruits program, Kean University

Gina Edwards

Faculty Advisor: Denise Anderson

"The Grove: A 100 percent Sustainably Sourced Food Place"

18 million acres of forests are lost each year worldwide. A majority of these forests are being removed to harvest more meat and dairy products, as well as for crops to feed cattle. This vast amount of land clearing causes a loss of plant and animal species releasing more CO2 into the atmosphere and destroying the homes of native indigeounous people. Research shows that people do not have enough information about deforestation to reduce their impact on it. "The Grove" is an affordable fast-food chain that uses 100 percent locally grown sustainably sourced products. Its purpose is to educate and provide nutritious food that does not contribute to deforestation.

Omar Emera

Faculty Advisor: Denise Anderson

"Sound: An Interactive Music Space in Schools Where Students Can Go When They Feel Overwhelmed"

The observation of my 12-year-old brother and his friends is that they get stressed out a lot. Research shows that 49 percent of middle-school children get overwhelmed daily due to pressures related to school and home. According to a survey of thirty of my brother's friends, things that cause the most stress include homework, peer pressure, and parental expectations. The findings of the survey revealed that listening to music was the most common way students escaped stress. Additional research confirmed that listening to music is an effective way to make people feel calm. To help my brother and other middle-schoolers, I created "Sound," a space where students can listen to music, calm down, and refocus their minds.

Nicole Emerson, Stephen Campano, Connor Bagen

Faculty Advisor: Efecem Kutuk

"Scrap Brass to Music Class"

Urban mining is reclaiming usable raw materials from old products, buildings, or waste. It is becoming increasingly important to reclaim these materials to ensure a greener planet. Our proposal is a non-profit business, a system that reclaims scrap brass to be used to make musical instruments for children.

Michael Christopher Ferraro

Faculty Advisor: Jobeth Bobee

"Self-Defense Keychain"

The aim of the self-defense keychain is to enable and empower users who are concerned about their ability to defend themselves. The self-defense keychain utilizes a user's set of keys where they can configure them in the product as a weapon of self-defense. An approach including research, ideation, comparative product research, prototyping, and testing was used to realize the design of the self-defense keychain. The self-defense keychain will allow users to feel safe and have confidence in defending themselves in hostile incidents.

Minna Gelberman

Faculty Advisor: Manuel Divino

“Om.Be Apartments: A New Solution for City Living”

Om.Be is a research-based design solution for New York City living. The research explores various aspects of city life, such as high rent prices, crowded apartments, and long commutes. Coupled with increasingly long work days, the result is a workforce that is over extended and susceptible to burnout. Additionally, construction of green apartment buildings is popular in NYC; however, these homes are sold to the wealthy class at premium rates. Om.Be offers apartments with compact proportions in a building with various shared spaces. Rent prices are subsidized by the New York State Green Building Tax Credit. The design challenge lies in creating a space that eases renters stress, while making affordable, sustainable living accessible to all.

Monda Gerges

Faculty Advisor: Manuel Divino

“Bhava Center for Young Adults with Depression”

Oftentimes, in our youth-focused society, people have the belief that the happiest days of our lives will be in our 20s, but often neglect the fact that it can be the toughest phase of a person’s life. The fantasy of our 20s being the years of exploration and fun, fails to mention the struggles of building a career, landing a job, paying loans, and achieving life goals. Bhava Center is for young adults suffering from depression is a place to unwind, be your true self, and gain support and encouragement from your peers. Bhava Center is designed to encourage social interactions, hobbies, and maintaining healthy sleeping and eating habits. This facility focuses on human-centered design and sustainable design for a healthy community.

Ashley Gross

Faculty Advisor: Alan Horwitz

“The Philly Touch Center for the Blind”

In the United States, 63,357 students under the age of 21 have visual deficiencies or are blind. 27 percent of the total visually impaired and blind population in the United States is under the poverty line due to lack of education and job experience. Only 40 schools in the United States are specialized in teaching the blind and more schools for those who are impaired are a necessity. The mission of The Philly Touch Center for the Blind is to provide a safe and welcoming environment for those who are visually impaired or blind in the community by promoting higher education, independent living, and life skills to those who seek a more advanced independent future.

Amanda Hernandez

Faculty Advisor: Denise Anderson

“Security for the Homeless”

The purpose of this research was to explore the issue of homelessness. The method of analysis is primarily observations and interviews through direct volunteer experience with the homeless population and conversations with subject matter experts. The goal of the study was to explore the consequences of the problem, both individually and socially, to evaluate existing solutions, and to identify suggestions for improvement. By partnering with New York City Relief, a faith-based mobile outreach organization, the Safe Keep program will supply security to protect essential belongings of the homeless. Ultimately, the goal of the program is to provide a design solution at the local level to improve the lives of New Yorkers struggling with homelessness.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Jacqueline Hernandez

Faculty Advisor: Jobeth Bobee

“You are my Sunshine”

This product is designed for people who recently got keys for the first time. The purpose of the keychain I made was to help people remember how beautiful life is and increase their happiness as they go through their day. The importance of industrial design that this product demonstrates is that it takes all the steps into account to make products. Industrial design is a combination of engineering and art that helps solves problems that arise in everyday life. In conclusion, it helped me explore materials and colors and it enhanced my 3D modeling/computer rendering skills. The result was a good model of a keychain that has a lot of symbolism and that has good packaging to attract the consumer’s attention.

Ariel Jack

Faculty Advisor: Manuel Divino

“Transitional Housing”

This study, Transitional Housing, is researching another means for optional housing when times are tough on a family and/or individual. This study includes programs that benefit the residents such as: daycare, cafeteria, clinic, public shower room, study room, and rooftop terrace. These things are going to help the families in need in order to get them back on track with their jobs, health insurance, and money situation. This program would be beneficial to not just families, but also people with disabilities, pregnant teens that have run away having nowhere to go, and foster children turning of age out of the foster program. This study will also show the success rate of transitional housing programming.

Alysia Kane, Mawaddah Nawar, Amanda Hernandez, Pranav Desai, Jessica Murray, Deana Abdou, Logan LeBuis, Gina Edwards, Raechel Kronyak, Tiffany Thebodeau

Faculty Advisor: Christopher Navetta

"The Community FoodBank of New Jersey"

The Community FoodBank of New Jersey (CFBNJ) fights hunger and poverty in NJ. They sought assistance from the Design Studio Practicum in developing a library of assets for the 45th anniversary to be used on social media and their website. DSP students had to delve into CFBNJ's history and conduct research into its accomplishments and goals. This included the design of graphics that showed CFB's growth over the years, research-based infographics celebrating milestones in CFB's history, and so on. It also manifested in a hands-on workshop during the Thinking Creatively Mini conference in the Fall of 2019. Students presented research and info about poverty and food insecurity to attendees, who then created personalized donation bags for goods collected.

Jaime Krass

Faculty Advisor: Manuel Divino

"Liberty Comprehensive Women's Cancer Care Center of New Jersey"

With advanced medical practices and new treatments being discovered daily, cancer care centers are expected to always be on the forefront of these findings. In order to achieve success at this, it is crucial to thrive in a building designed to allow you to do so. The purpose of conducting this research was to gather and interpret key components pertaining to designing a successful Cancer Treatment Center. All angles needed to be represented when conducting this research; the health and well being of not only the patient population, but also the staff must be considered, as well as making sure the center as a business thrives. Building longevity and self-reliance was also considered when designing the center, making it a completely sustainable entity.

Raechel Kronyak

Faculty Advisor: Denise Anderson

"Seek: Creating a Conversation About Suicide"

Mental health plays a huge role in one's life, and although the suicide rate has decreased since 2010, it is still prevelant in young adults (aged 18-30). Social media is a tool that can be used to communicate and create an open conversation about suicide and suicidal thoughts. Based on a survey of over 100 young adults, people believe that if suicide becomes more of an approachable topic of discussion, the suicide rate may decrease even more. "Seek" is a suicide prevention campagin that focuses on creating a community of support for people struggling with suicidal thoughts, and uses social media to remind them that they are not alone.

Logan LeBuis

Faculty Advisor: Denise Anderson

"Hearty Helpings: Providing Nutritious Meals to Food-Insecure Families"

For food-insecure families, eating healthy isn't always a luxury that they can afford. Research shows that healthy food options are perceived to be more expensive and less accessible than unhealthy choices. Lack of knowledge over proper nutrition is also a factor. Insights from a subject matter expert, as well as interviews and a survey with food-insecure persons revealed that families sometimes negotiate to buy food overpaying for rent or utilities. To help solve this problem, I created "Hearty Helpings," a fresh ingredient subscription box service. The purpose of Hearty Helpings is to provide healthy meals to food-insecure families and education on proper nutrition.

Erin Malone

Faculty Advisor: Linda O'Shea, Manuel Divino

"Union Park: Coworking"

Union Park is a collaborative office space that offers professionals options on how their work environment can support their working lifestyle. The space offers a varity of options for leasing a desk or private office, working in open benching areas, and collaborating with clients and co-workers. Evidence-based design research and case-study analysis indicated that people's work efforts are maximized in coworking spaces instead of working from home in secluded and unenthusiastic environments. In a 2019 study reported by the Huffpost, 60 percent of people reported to be happier with their home lives since coworking. It appears that coworking not only improves work habits, but also allows for people to have a more balanced overall life, contributing to less stress and improved mental health.

Monica Morales

Faculty Advisor: Manuel Divino

"Pearl Peak Ski Resort"

Skiing, snowboarding, and winter sports have remarkably progressed over the years. These types of activities draw in families and people of all different ages, race, ethnicity, and social status. "With the number of skiers worldwide now numbering 115 million and rising, the demand for new purpose-built ski resorts has never been higher" (Scott). Through landscape, architecture, and interior design, this new purpose-built resort will be transformed into a vibrant and pedestrian-oriented center for year round mountain activities.

Rob Nalesnik

Faculty Advisor: Manuel Divino

"Omniana: Rotating Chef Residency The Narrator: Extended Stay for Chef and Staff"

Omniana is a restaurant space devoted to bringing exposure to creative gastronomy and the minds behind the process. The main design feature of the space is a large, gradient-shaded glass-enclosed kitchen where guests can view and feel the energy of the chef and staff. The materials and finishes selection of the space is lead with intentful generality. While the decor of most restaurants is driven by the geographic specificity of the fare, the randomness of Omniana's menu calls for a universal approach to design. The decor is not committed to one specific style, but rather an atmosphere that can span genres. The Narrator is an extended-stay living arrangement for the chefs and staff of the rotating restaurant below.

Alexandra Obszanski

Faculty Advisor: Alan Horwitz

"Senior Thesis Project: Apotheke, Pharmacy of the Future"

I redefined an original Walgreens pharmaceutical design plan by creating a space uniquely for the customer and pharmacist to interact and engage in a more interpersonal and interactive relationship. The new design develops a more comfortable and accessible atmosphere for customers who desire making more one-on-one, close-knit connections with their pharmacist. Problems one might have within a pharmacy can be dealt with more expeditiously, and the customer can leave with ease knowing their personal information was dealt with in an exclusive and confidential manner by this effortless and surrealistic enjoyment of a grab-n-go experience, where everything that involves receiving prescriptions is handled in a personal and confidential manner.

Jacqueline O'Connor

Faculty Advisors: Ed Johnston, Denise Anderson

"NanoSprout"

Technology and media use have a dramatic impact on a child's overall well-being. 98 percent of children under the age of eight are engaging with apps on a digital device every day. According to a survey by CBS News, 95 percent of these apps contain in-app advertisements and inappropriate content. Currently, the term "educational" is a label used by developers for kids, making it extremely difficult for parents to identify quality apps for their children. In response to this problem, I created "NanoSprout," a digital platform that offers expert and community-based reviews on apps targeted towards young children. The purpose of NanoSprout is to help parents and caretakers make mindful and informed decisions about the selection of apps for children.

Jacqueline O'Connor, Sara Passafiume

Faculty Advisor: Ed Johnston

"NJ Transit Mobile App Redesign"

NJ Transit is the nation's largest statewide public transportation system that provides more than 944,000 weekday trips through bus routes, light rail, and rail lines. Based on reviews from the app store, the NJ Transit app (version 2013-2019) had a 2.1 star rating out of 5, with a range of complaints. In response to this problem, we redesigned the mobile app using research and insights collected from surveys and user testing. Through surveys, we discovered which features to prioritize, how the app was used, and user pain-points with the mobile experience. Our goal was to simplify and add structure to the app that was convenient for daily users, while also being easily interpreted to new ones.

Jacqueline O'Connor, Tiffany Thebodeau, Ray Hogrelius

Faculty Advisor: Ed Johnston

"SPF Research: Michael Graves Residence VR Project"

The mission of the Michael Graves Warehouse VR project is to provide Kean University and the public with immersive experiences about the property. Prototypes of virtual reality scenes were captured with a 360-degree camera. Our team created a voiceover experience to accompany audiences as they virtually travel through the different spaces. We explored platforms to showcase the residence with the public and classrooms off-site. A visual identity was created for the project using inspiration from Michael Graves' postmodern and humanistic design. This poster presentation will document our research and process of creating this project. Also, a VR headset will be available to experience the project.

Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

Jacqueline O'Connor, William Wallace, Manuel Cespedes, Pranav Desai, Erica Eisenhauer, Nicole Emerson, Erick Hernandez, Freddy Lau, Sara Passafiume, Anthony Subervi, Catherine Circonciso, Zoe Feuer

Faculty Advisor: Ed Johnston

"Nantucket Harbor Visualization Project: NHA Research Initiative"

How might we create a visualization of the Nantucket Harbor which enables an audience to experience how it would have appeared in the mid-1800s and early 1900s? This was the design problem with which our design student team was challenged. This poster presentation will document our process of applying a design thinking research methodology in order to establish and solve this design problem. It will include details of the specific needs of the Nantucket Historical Association and its intended audience in relationship to this experience. The poster will document our specific process in arriving at an initial prototype of the visualization. The poster will document testing and intended next steps for shaping refined prototypes.

Melissa Ostrander, Zandra Aguilo, Jillian Belda, Danielle Thomas

Faculty Advisor: Christopher Navetta

"How Long Must We Wait: Suffrage and the Ladies of Liberty Hall"

The Design Studio Practicum has been working for a decade with Liberty Hall in designing their exhibits. For 2020, DSP students will be researching women's suffrage and designing "How Long Must We Wait: Suffrage & the Ladies of Liberty Hall." The exhibit focuses on the contribution of the ladies of LHM, their roles in the movement, and the steps leading to the right to vote. Research into the struggle for women's suffrage in specific relation to the women of Liberty Hall will visually manifest itself in the visual branding for the exhibit, as well as a timeline that spans the exhibition space, highlighting the women's suffrage movement. Social media tie-ins to promote the exhibition, as well as an experiential components are to be included.

Anjali Parmar

Faculty Advisor: Denise Anderson

"The Melli Project: Believing the World can be Made Better with Human Effort"

One in three families and over 100,000 people living on the streets in the tri-state area struggle to afford basic hygiene products and do not have access to clean water. On average, research shows an individual spends $720 yearly on personal care items, and this cost is nearly double for women. These underserved people rely on public toilets and sinks for basic hygiene practices. To address this problem, I created "The Melli Project," a program that distributes hygiene kits to the underserved. The purpose of "The Melli Project" is to reduce the stigma of asking for basic hygiene products and to provide people access to clean water and follow-up care.

Sara Passafiume

Faculty Advisor: Denise Anderson

"DayLily"

Almost everyone knows somebody who has dealt with substance abuse, whether it's a family member, a friend, or someone in the community. In 2017, 20.7 million Americans over the age of twelve needed treatment for addiction, and only four million sought treatment for it. The accessibility of and success in the treatment of substance abuse requires more than financial resources and community support. To address this problem, I created "DayLily," a non-profit center focusing on holistic solutions in the treatment of those with a substance abuse disorder. The purpose of this center is to help people through mindfulness meditation to overcome addiction by finding a sense of purpose and becoming part of a community.

Sara Passafiume

Faculty Advisor: Ed Johnston

"Eat This"

Six years ago, I was diagnosed with Celiac's Disease, a disorder in which eating gluten triggers an immune response in the body. Living with Celiac, I have experienced the frustrations and anxiety of finding food or a restaurant where it is safe to eat. In addition to my disorder, there are many people with dietary restrictions, such as allergies, intolerances, religious practices, and personal preferences. I created "Eat This," a mobile app that allows users to find restaurants that are certified "safe," scan food items by their UPC symbols, share dietary concerns with a community of people, and find recipes based on restrictions. The "Eat This" app provides people with peace of mind when shopping for food and eating outside of the home.

Phillip Pezo

Faculty Advisor: Jobeth Bobee

"Fidget Toy"

Toys can be important to people with special needs, ADD, ADHD, anxiety, and stress. I did research to find what has already been made and decided to focus on toys to play with. I used 3D prints in all of my design phases and testing. Testing include observational journaling and interviews. My toy uses movement to engage the user and the final design will give users more freedom to play.

Julia Romeo

Faculty Advisor: Linda O'Shea, Manuel Divino

"ASL Children's Care Center"

The project that was designed for this research is a before and after school center for children and young adults who have trouble with seeing and hearing. The center will be used to help individuals learn ways to communicate with others and the outside world, having to bring ASL (American Sign Language) into the community. With this benefit, kids who suffer from this disability can also have a chance to enjoy a typical childhood, like the rest of the other children. As part of this project, the building will be designed with sustainable and eco-friendly materials. It is going to be located in Paradise Hills, California, which it is ranked to be Number 1 in sustainability around the country.

Lisa Shi

Faculty Advisor: Jobeth Bobee

“The Gourd Keychain”

My product helps give nostalgia to people who played with Russian Dolls in their childhood in a keychain form and it is also something fun to have on your keychain. The importance of this project to industrial design is that it enhances most aspects of this career and it takes all the steps into account to the making of products. This project also teaches 3D printing skills and model making. The outcome of this project was to improve Cad and 3D printing skills. It teaches how to choose the right material and color for the product. The final result was a Gourd keychain that has many features for a fun and surprising experience.

Benjamin Smith

Faculty Advisor: Jobeth Bobee

“The Ghost”

The Ghost keychain gives a hands free feel when holding your keys. This modern keychain allows runners to comfortably hold their keys while running, eliminating rattling in the pocket or awkwardly holding them in your hand. The Ghost allows for active use and passive use. Hold your keys naturally in your palm when running or allow the keys to rest on your backhand with no impedes to your dexterity. Some problems I faced were sizing and style. After multiple designs, 3D prints, and testing phases, the final shape allows for the best comfort and a unique double ring stylistic feature.

Anthony Subervi, Nicole Emerson, William Wallace, Jacqueline O’Connor, Sara Passafiume, Manuel Cespedes, Erica Eisenhauer

Faculty Advisor: Ed Johnston

“Whale Rescue Immersive Experience: Nantucket Historical Association Research Initiative”

Our design student team was challenged with the following design problem: How might we recreate an experience of a whale rescue within the NHA Whaling Museum in such a way that it immerses the audience in that rescue? This poster presentation will document our process of applying a design thinking research methodology in order to establish and solve this design problem. It will include details of the specific needs of the museum and its intended audience. The poster will document our specific process in arriving at an initial prototype of a three-dimensional, 360-degree animation, which visualizes a diver rescuing a whale from entanglement with ocean refuse. It will document testing and intended next steps for shaping refined prototypes.

Tiffany Thebodeau

Faculty Advisor: Denise Anderson

“‘Planet Z:’ Educational and Interactive Pop-up Museum”

Littering has become a leading universal problem and continues to have damaging effects on society and the environment. Research shows that 60 percent of littering behavior is adopted at a young age and that litter education is not enforced in schools. Individuals who are part of Generation Z are the most frequent culprits of this behavior. A survey was conducted among 51 individuals, of whom 38 did not know how litter was properly disposed of. To address this problem, I created “Planet Z,” an educational and interactive pop-up museum that can inspire Generation Z to advocate for a litter-free world. Visitors are transported into a space where they are on a mission to save the earth.

Rebecca Travisano

Faculty Advisor: Linda O’Shea, Manuel Divino

“Home: A Memory Care Center for Loved Ones”

Having personally experienced my late grandmother with Alzheimer’s and visited her in the dark and depressing setting in which she lived, as a designer I realized that the environment had a profound effect on family and visitors, and negatively impacted the limited amount of time left to spend with my grandmother. Drawing from life experiences, the Home – Memory Care Center for Loved Ones was designed to create a home environment that centered around the residents’ comfort, health, and well-being. The design centers around biophilic design solutions, as evidence –based healthcare design research has proven that it creates numerous health benefits for residents and family members alike. Creating a sense of “home” through design contributes to a sense of safety, comfort, and well-being.

Peyton Waters

Faculty Advisor: Linda O’Shea, Manuel Divino

“Hammonton Elementary”

Achieved through 19,000 square feet is an educational establishment targeted for elementary students in the Hammonton school district. Known for its abundance of collaborative spaces and bright palette, this exuberant space embodies an atmosphere that children can relish. Three features pushed within the setting are an influence from nature in the learning place, acknowledgement of mental health in young students, and emphasis on school safety through security and correlating design features. This space prevails as the ultimate center for learning.

Shannon Weidele

Faculty Advisor: Linda O'Shea, Manuel Divino

"Hudson Youth Center: Restructuring the Juvenile Detention Center"

The Hudson Youth Center was designed to make a difference in the juvenile detention system. Two million youths are arrested annually, but many juvenile justice systems inappropriately detain low-risk youths. Built upon evidence-based design research and case study analysis of other innovative detention centers, the Hudson Youth Center is designed to support the objective of zero-detention, as well as provide life skills training. Supporting the biophilia hypothesis, natural elements are implemented throughout the center, reinforcing humans' innate connection to nature. The Hudson Youth Center is a space where youths can work through issues together while they can return home to put their learned skills into action.

Kimberly Wheeler, John Almeida, Zachary Dubits

Faculty Advisor: Efecem Kutuk

"Un-Boxing: Amending the Life Cycle of Steel Containers"

Examining the human factors of environmental decay and pollution leads to the growing practice of Urban Mining. With landfills taking up an unprecedented amount of space and natural resources continuously declining, repurposing materials is of utmost importance. Approximately 11 million shipping containers sit docked after a short lifespan of 10-12 years; this wastes space, material, and opportunity. By finding alternative uses, one can not only free up valuable property, but also make a profit.

Matthew Wotasek

Faculty Advisor: Denise Anderson

"We the Women: A Podcast About Women in Politics"

Women are not well represented in U.S. politics. Even though 51 percent of the population are women, only 25 percent serve in the Senate and Congress. Research shows that even though women may be qualified for a political position, the perception is that they are too emotional, unable to balance work and family, and too bossy. A survey of young adults revealed that the best trait of a woman for a leadership role is communication. To provide a voice to women who want to serve in politics, I created "We the Women," a podcast for women about women. The purpose of "We the Women" is to create a platform for discussion of political views and sexism of women in politics.

Juan Jacobo Yarce

Faculty Advisor: Denise Anderson

"Eco Organics: An App to Find Organic Food at an Affordable Price"

Non-organic food sources can include chemicals, preservatives, or additives that may cause health issues when consumed over time. To purchase food without chemical pesticides, consumers must buy organic food from certified organic farms. Research shows that only 1 percent of the two million farms in the United States are certified organic, which therefore raises the price to purchase organic food. To solve the problem of finding organic food at a lower-cost, I have created "Eco Organics," an app that aims to bring organic food to all customers, regardless of their budget. The purpose of "Eco Organics" is to help consumers find competitively priced organic food options in stores and on websites.

PUBLIC ARCHITECTURE

Eric Anderson

Faculty Advisor: Gabriel Fuentes

"Urban Interiority"

This research was conducted as part of a thesis project in architecture about urban living. Its goal was to produce a program and/or site that exists within Rem Koolhaas' seminal text, "Junkspace." By reinterpreting "Junkspace" through a contemporary urban/cultural lens, I propose a series of urban programs and environments, represented through visual studies and other media. My goal was to find new relevance to "Junkspace" within a 21st century urban condition, to use what Koolhaas saw in the 1990s, and to find a lens to evaluate 2020. My contemporary "Junkspace" environments address how the individual exists within such an environment.

Kayla Ayala

Faculty Advisor: Craig Konyk

"The Psychological Affect of Design Through Architecture"

Through my project, I will reveal numerous ways in which we are psychologically impacted by the way areas are designed and how you should take advantage of this through architecture and as individuals choosing their environments. How can architecture improve living conditions? Architectural design is basically centered around the way in which we experience and view the structures/spaces created. Architects have the opportunity to enhance the spaces we occupy as well as impacting individuals who experience the space.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Todd Blackburn

Faculty Advisor: Jonathan Parker

“Agriculture Meets Urbanism”

In the next fifty years, more food will be consumed by us than in the past ten thousand years combined by humanity due to rising global populations. This need for food is made harder as climate change has caused a decrease of farmland because of flooding, droughts, and natural storms. These factors are bringing awareness about food security as rising urban populations and decreasing farmland threaten to create a food demand that will surpass the supply. Not only is traditional farming being destroyed by climate change, but it is helping to cause climate change. Humanity needs a better system than traditional farming to battle food security and climate change; that better system is vertical farming.

Sean P. Boud

Faculty Advisor: Camille Sherrod

“Domus Commune: Modular Flexible Co-Housing in Rome”

This project was developed to create affordable housing in Rome and address the large quantity of uninhabited buildings in the city. Using an abandoned hospital as a base to design the new system, the project is a multipurpose living space built with a three-dimensional steel grid that responds to the urban context of Rome. The core elements of the project are Co-Living and Self-Construction. This system encourages residents to design their living spaces to best suit the collective. Guided by a ruleset for construction, residents are able to build within. This creates a sense of community and allows users to create formal variation. Residents are encouraged to live collectively and express themselves through the structure of the building.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Hugo Burgos

Faculty Advisor: Craig Konyk

“Life on Mars”

Climate change is an indelible part of our present-day lives. The devastating wildfires in the Amazon, widespread famines and extreme droughts in India, massive floods, deadly hurricanes, etc., that we’re seeing more and more these days will cease to be statistical anomalies, and instead be more like seasonal markers. With so much heat-trapping carbon in the atmosphere, there will be, in effect, no turning back. We must accept that we have lost the war on climate change. Inspired by engineer John P. Allen’s design for the project “Biosphere 2” (Earth is Biosphere 1) located in Oracle AZ, in which is a self-sustaining city inside a protective bubble, the aim of this research is to create a version of “Biosphere 3” that can sustain human life on Mars.

Research supported by: Research Recruits program, Kean University

Sol Condo

Faculty Advisor: Gabriel Fuentes

“Radical Architecture for a Passive Public”

Looking at the state of leftist politics in the United States, this research evaluates the current political strategies used by the left, their effects (or ineffects), and how they can be adapted and improved to have stronger agency today. Based on this research, I propose a contemporary type of radical architecture that could facilitate a strengthened leftist political agenda.

Meagan Davis

Faculty Advisor: Gabriel Fuentes

“Adapting to Carbon”

Our world is full of embodied carbon and currently facing the repercussions of fossil fuel and wasted energy. Architectural design has a major role in this process as far as materials, construction, energy, buildings, etc. We have the tools and research to change design in order to adapt to climate change and air pollution. The only logical way of approach is to control carbon emissions and reduce the amount of carbon being used. Including carbon adaptive reuse systems as a part of predesign and schematic design replenishes the ground with carbon, cleaning the air and geothermal systems, reducing fossil fuel-based energy, etc. Carbon shouldn’t be an afterthought.

Andrew Engelhardt

Faculty Advisor: Gabriel Fuentes

“Design Research as Site and Program: Mapping the New Jersey Transit Raritan Valley Line”

This research, my contribution to a collaborative land use and zoning analysis along the NJ Transit Raritan Valley Line, addresses the complexities that arise when conducting “pre-design” field research to determine the site and program for an architectural project. Using zoning maps as a starting point, I use mapping techniques to explore the intersectionality of land use with transportation infrastructure, property value, neighborhood demographics, and commuter behavior patterns. The collaborative research conducted by this SoPA graduate architecture studio provided a refined assessment of site conditions, functional programs, structural systems, environmental impacts, and cultural precedents to inform individual student projects.

Daija S. Ford, Breonna Bradshaw, Anthony DiGeronimo
Faculty Advisor: Gabriel Fuentes

"Giacomo Bathhouse and Co-Living Complex"

During Roman antiquity, bathhouses were a crucial part of culture and public life. Every day, people would gather at the bathhouse to meet friends, soak in the pools, exercise, and relax. Bathhouses were considered architectures of leisure—recreational centers where Romans could participate in and enjoy public life. They included cold, warm, and hot baths, as well as a mixture of public programs, including libraries, gyms, exercise rooms, cafes, lounge spaces, and lecture halls. The Giacomo Bathhouse & Co-Living Complex is organized around a multi-level courtyard on the axis with Giacomo Church that holds together 3 key aspects of ancient Roman culture: physical, mental and spiritual care.

John D. Grega
Faculty Advisor: Craig Konyk

"Waiting in Vain"

For the Fall 2019 semester, I looked into the negative aspects of public transportation that we have allowed to happen with our horrible American Infrastructure, which received a D- in "Transit" back in 2017, as well as how we could be representing social and architectural problems. Representation can be more than images and sketches. In the profession, we get caught up on making representations that are joyful and optimistic scenes with no real awareness of the looming threats. The images I produced come down to showing a dystopian look at where we can be heading with over crowded subway cars, pollution riddled tracks, and the negative climate effects public transportation can have.

Jeremy Gusset, Gabriel Castillo
Faculty Advisor: Craig Konyk

"Living Cemetery"

Cemeteries are spaces that exist in every community throughout the entire world. There is an opportunity to repurpose these places that are only used to commemorate the dead by adding additional uses for the living. At a time when land in urbanized areas is becoming increasingly scarcer, it is urgent to give cemeteries more than a single function. Our research focuses on design interventions that could compliment the traditional headstones and monuments, for a sustainable approach that could be implemented anywhere. The goal is to keep the memories of those who have passed alive through the activities of the living who will interact with these new monuments, and in the process, become active present-tense commemorations of the deceased.
Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Joseph Ong
Faculty Advisor: Craig Konyk

"Surround Sound Architecture"

You may not know it, but architecture influences decisions, emotions, actions, and experiences with its spatial organization, materials, and looks. This project aims to combine varying experiential qualities and develop them into an experimental journey. Separated by program, each individual's journey is different, but all routes lead to the same destination, the Piazza. The warehouse-esque interior allows audible experiences to be heard from other personal journeys collaborated into one. However, the material used diminishes the echoes of a thousand voices, so that visitors are not overwhelmed by a confusing mesh of noise, but may peer into different paths that "echo" flavors of its origins.
Research supported by: Research Recruits program, Kean University

Sandra Rodas
Faculty Advisor: Gabriel Fuentes

"Agroexpansion: An Urban Strategy for Public Agriculture Along NJ Transit The Raritan Valley Line"

While agriculture holds strong in the cities and towns along the NJ Transit Raritan Valley Line, its effects are not experienced equitably. With 9,100 farms across 720,000 acres of land, the Garden State grows everything from peppers to Christmas trees—ranking among the top 10 nationwide in the production of cranberries, bell peppers, spinach, blueberries, peaches, cucumbers, squash, tomatoes, apples, sweet corn, and snap peas. As a multi-scalar urban design strategy, agro expansion leverages New Jersey's agriculture and related systems to address social and economic inequalities in food distribution and water access in underrepresented communities along the Raritan Valley Line, drawing systemic links between and among Newark and the agricultural system along the way.

NATHAN WEISS GRADUATE COLLEGE

COMMUNICATION DISORDERS AND DEAFNESS

Bryanna Almanzar, Jackie Portnoy
Faculty Advisor: JoAnne Cascia

"Examination of Empathy Skills in College Students"

Empathy Skills in College Students is a study with the purpose of evaluating and analyzing the ability and capacity of students in college to understand or feel the emotions of others. A Qualtrics survey was created and distributed to college students, using the Empathizing-Systemizing Test and Interpersonal Reactivity Index(IRI), as well as a demographic questionnaire. Participants were invited through their university. Responses were analyzed for patterns or correlations between characteristics, such as academic major. The purpose of the study is to compare and analyze how an individual's environment or experiences have impacted their emotions towards others. Data collection is ongoing at this time.

Research supported by: Research Recruits Program, Kean University

Carol Bernal, Brittney Georges
Faculty Advisor: Sarah Patten

"Speech Perception in Bilingual (Spanish-English) and Monolingual (English) Children"

The purpose of the study aims to investigate if Bilingual (Spanish-English) and Monolingual (English) children provide the same or different responses on a word identification speech perception assessment. This research aims to investigate whether testing the pre-requisite skills of speech perception in young bilingual children, may provide a more sensitive measure for SLPs when considering language delay, disorder, or difference, than traditional language assessment measures. It may also provide evidence as to whether an American English assessment meets the need of bilingual children. The performance of monolingual and bilingual children on such assessment will be defined and discussed.

Vanessa Cabrera, Katrina Liwanag
Faculty Advisor: Sarah Patten

"Speech Perception in Bilingual Children With and Without Language Difficulties"

Graduate students studied the way bilingual children (Spanish-English) between the ages of 3:0 and 5:11 develop language processing skills. Prior research in speech-perception has examined differences between monolingual and bilingual school-aged children. However, schools still face the risk of falsely labeling students with a language difficulty instead of recognizing potential gaps as a cultural difference. This research study examined the suitability of the amended Wales Hearing Impairment Speech-Perception Assessment (WHISPA) and its role in the bilingual population. It also investigated the differences in responses between typically developing (TD) and language difficulty (LD) bilingual students utilizing a minimal pair test.

Sara Castanheira, Jessica Sainz
Faculty Advisor: JoAnne Cascia

"Gender Differences in Initiating Clarification of Nonsense Words in Children and Adolescents"

This study investigated gender differences in children and adolescents' ability to initiate clarification of ambiguous information. If children and adolescents do not ask for clarification of unfamiliar words/concepts, it may impact their learning in the classroom. Research was conducted in a one-on-one setting between a single participant and graduate-student researchers. Participants were asked a series of simple "wh-" questions. Eight of the twenty total questions contained nonsense words. Researchers collected data on all responses from participants, keeping record of requests for clarification. Data was analyzed for gender differences using SPSS and demographic forms were completed by parents/guardians.

Gina G. Chavarria, Kayla Mills
Faculty Advisor: Joanne Christodoulou

"Visual Modifications: Contrast Modifications to the Comprehensive Aphasia Test (CAT)"

Aphasia, a neurological disorder that results from one-third of strokes, may co-occur with visual processing deficits (Manasco, 2017). Aphasia is diagnosed utilizing standardized assessments (2017); however, these lack adaptations for co-occurring conditions. This quasi-experimental study addresses the demand for adaptations of aphasia assessments (i.e., contrast enhancement). Enhancing visual stimuli may provide individuals with visual deficits the opportunity to achieve a representative score. The hypothesis states that modified visual stimuli will not alter the processing time of test items; therefore, visual modifications may yield a more accurate aphasia diagnosis of individuals with visual deficits without compromising test protocol.

Serena Cuebas
Faculty Advisor: Sarah Patten

"Knowledge and Needs Assessment of SLPs for Parent-Implemented Telepractice: Young Children with ASD"

According to Autism Speaks, 1 in 59 children were diagnosed with ASD in the United States in 2018. Family-centered early intervention must be provided to support the language development of these children and to support the families of children with ASD. Telepractice could increase access to evidence-based parent-implemented ASD interventions. Speech-language pathologist (SLP) perceptions must be taken into account. The primary aims of this study were to determine (a) the perceived level of difficulty of telepractice as compared to face-to-face service delivery, (b) the perceived benefits and barriers of telepractice, and (c) to establish whether further resources need to be developed to support SLPs interested in telepractice.

Sarah Diaz, Erin Pagano, Casey Sullivan
Faculty Advisor: Joanne Christodoulou

"Visual Modifications: How Do You See Belle's Modified Boston (BMB)?"

Aphasia currently affects over 2 million Americans, and the yearly cases of individuals acquiring aphasia are expected to double to 180,000 by the year 2020 (National Aphasia Association, 2019). Most individuals that acquire aphasia also present difficulties in their vision (Rowe et al., 2009). However, there is little clinical research completed on evaluating individuals who have visual impairments following a stroke. Therefore, many aphasia tests do not currently include normed visual modifications for this population. This quasi-experimental study determined the impact of processing time and the ability to identify and describe visual stimuli when modifying the Boston Diagnostic Aphasia Examination, 3rd Edition.

Monica Fazio, Andrea Herman
Faculty Advisor: Joanne Christodoulou

"Visual Modifications, How Do You See It?: Isolation Modification to the EFA-4"

The use of standardized assessments allow clinicians to establish a client's baseline of abilities and areas of deficit that need to be addressed in primary areas of spoken and written language and comprehension. The purpose of this study is to determine whether visual modifications made to the assessment, Examining for Aphasia- 4th Edition (EFA-4), yield the same or increased processing times. These modifications will allow speech-language pathologists to administer tests to the visually impaired. We hypothesize that when administering formal assessments to visually impaired adults with aphasia, accommodations can be made with the implementation of isolating the stimuli that is proportionate to the original stimuli.

Ursula Glackin
Faculty Advisor: Sarah Patten

"Supplemental Phonological Awareness Programs to Strengthen Emergent Literacy Skills in Kindergarten"

There is limited research regarding individual phonological awareness programs, which are commercially available. Evidence has shown there to be a positive impact on children's phonological awareness, a crucial prerequisite for emergent and early literacy development, with supplemental instruction in the classroom. The purpose of this study is to compare two supplemental phonological awareness programs used with kindergarten students. A quasi-experimental design will be used to determine progress made by the participants when these programs are delivered in kindergarten classrooms by the speech-language pathologist. In addition, components of each program in regard to skill sequence, activities, and techniques will be compared.

Arlene Hernandez, Alexandria Mironski, Alexandra Scarpa
Faculty Advisor: Mahchid Namazi

"Exploring Conversational Language in Bilingual Young Adults"

The purpose of this study is to explore conversational language in bilingual young adults. Research conducted on monolingual participants has shown that conversational discourse can be used by speech-language pathologists to evaluate for language disorders. Subjects were given a questionnaire and administered a brief assessment, the Test of Adolescent and Adult Language, which assessed language in adolescents and young adults. Following this assessment, subjects were asked general questions about hobbies and life as a student at the university. Results of these samples will be presented. Language sample analysis is an important tool used by speech-language pathologists when evaluating bilinguals, who may have language disorders.

Darya Hinman
Faculty Advisor: Sarah Patten

"Effective Feedback Methods for SLP Graduate Students"

The purpose of this study was to demonstrate whether Bluetooth technology is beneficial for a clinical setting at Kean University Center for Communication Disorders. Utilizing a device, such as a Bluetooth earpiece, can help supervisors support the supervisees without their physical presence in the room. The objective of this study was to investigate which feedback method the SLP graduate clinicians and their supervisors preferred. The objective was met through the utilization of surveys at the end of the study. This investigational study and information it provides will add to the information SLP supervisors may need to improve clinical practicum experiences and learning for their supervisees.

Nikki Hurd
Faculty Advisor: Sarah Patten

"Speech-Language Pathologists' Use of Water Protocols with Patients with Oropharyngeal Dysphagia"

This study aimed to find if SLPs in skilled nursing facilities were aware of minimizing aspiration risks and medical declines by utilizing water or ice chips protocols. It was suspected that many SLPs were prescribing thickened liquids for patients with oropharyngeal dysphagia without further determining the use of water or ice chips protocols to prevent the risks of conditions such as dehydration, malnutrition, urinary tract infections, and exacerbations of medical conditions, while also improving quality of life. Such protocols can also be of gain to patients that are nil per os (NPO) and critically-ill. It is important in clinical practice for SLPs to determine the case-by-case candidacy of each patient when providing skilled services.

Marissa Iskandar, Lisa Calabrese

Faculty Advisor: JoAnne Cascia

"Children's Propensity to Ask for Clarification Based on Past Therapy Experiences"

This study investigated children and adolescents who have received speech or language therapy regarding their ability to request clarification when presented with ambiguous information. These children may be missing information that a speaker is presenting when they do not ask for clarification of unfamiliar words/concepts. Research was conducted in a quiet one-on-one setting between a single subject and graduate-student researchers. Subjects were asked a series of simple "wh-" questions in which eight of the twenty total questions contained nonsense words. Researchers collected data on all responses, keeping record of requests for clarification. Data was analyzed using SPSS to determine differences in responses between participants who had previously received speech-language therapy services and those who had not. Demographic forms were completed by parents/guardians.

Emily Jurcsek, Danielle Oakes, Victoria Giannone

Faculty Advisor: Joanne Christodoulou

"Auditory Accommodations: Can You Hear Me Now?"

This investigation will examine the impact of auditory approaches on standardized speech/language assessments for individuals with hearing loss (HL) by comparing processing time in two aided and one unaided testing conditions. Aided conditions include the PockeTalker (a device that amplifies sounds and "shapes" auditory signals) and adjusting speaker volume. The Ross Information Processing Assessment, 2nd Edition will be administered utilizing a split-half research design, comparing processing time in individuals with HL across the three conditions. This research may impact future assessment procedures, specifically, the inclusion of auditory accommodations and collecting more accurate scores while maintaining assessment integrity.

Rebecca Kornfeld, Genesis Garces

Faculty Advisor: JoAnne Cascia

"Do Children and Adolescents Request Clarification When Presented with Nonsense Words?"

When encountering new information, children will inevitably be faced with challenges. One of the strategies children use to cope with these challenges is requesting for clarification when needed. However, it has been established that not all children utilize this strategy as often as others. The present study investigated children and adolescents' ability to request clarification when presented with a series of questions embedded with nonsense words. Research was conducted in a quiet room with a single participant and graduate student. Participants were asked 20 wh-questions, 8 of which are embedded with nonsense words. Researchers recorded participants' responses and requests for clarification. SPSS was utilized for analyzing data.

Judith LaBarbera

Faculty Advisor: Sarah Patten

"SLPs Ability to Identify Observable Features to Accurately Diagnose Childhood Apraxia of Speech"

For the past five decades, researchers have studied various procedures to diagnose childhood apraxia of speech (CAS). Currently, speech-language pathologists (SLPs) use a variety of standardized assessments to determine if an expressive language impairment is present and the child's ability to perform non-verbal and verbal oral motor tasks. Observable features, such as groping, inconsistent sound errors on consonants, and vowels, are just a few to diagnose CAS accurately. Lack of knowledge and experience can lead to the misdiagnosis of CAS, causing inappropriate treatment approaches and slow progress in therapy. Therefore, the gold standard remains the SLP's clinical expert opinion acquired from working with children exhibiting CAS.

Rebecca Lotwich, Kristine Gaffney

Faculty Advisor: Joanne Christodoulou

"Visual Modifications: How Do You See It? Enlargement Modifications for the Western Aphasia Battery"

Visual impairments can negatively alter language assessment results for individuals with an acquired brain injury (ABI). Making reasonable adjustments for examinees with particular impairments enables them access to assessments that accurately demonstrate their skill level. Test modifications that do not impact processing time could accurately measure examinees' performances, regardless of visual deficits. This research examines if enlarging visual stimuli on a standardized assessment for individuals with visual impairments would affect language processing time and aid in language impairment diagnoses for visually impaired individuals with an ABI. Preliminary results indicate that enlarging visual stimuli does not alter processing time.

Genara Martins, Sara Ridgway, Elena Vilar

Faculty Advisor: Sarah Patten

"Comparison of Speech Perception Assessment Administration Using Monitored Live Voice and Recorded Voice"

Researchers compared a modified version of the Wales Hearing Impairment Speech Perception Assessment administration using Monitored Live Voice and Recorded Voice stimulus presentations in the hearing impaired (HI) pediatric population. A review of literature suggests that the field of speech-language pathology may lack a clear/investigated speech perception (SP) test to administer to the desired population in the USA. A quasi-experimental design was employed. Researchers used a qualitative analysis to compare/contrast the obtained results from both recruited groups. Researchers theorized different levels of performance upon methods of administration to identify a SP deficit to minimize its impact upon HI children and their families.

LisaRose McCabe

Faculty Advisor: Sarah Patten

"Chin Tuck Against Resistance: Does Resistance Amount or Delivery Method Matter?"

Chin tuck against resistance (CTAR) is a clinically popular method for exercise based dysphagia therapy. Although CTAR is not a direct swallow exercise, it incorporates kinematic and neuroplasticity principles to effect change in the swallow musculature. Currently, there is a lack of specific delivery method parameters including resistance supplied and amount of force applied by the participant. This study incorporated a mixed methods design to increase knowledge of how much effort is exerted by the suprahyoid muscles during dry and liquid swallows and resistance to begin development of a quantifiable, reliable, cost effective, and portable CTAR protocol for the older adult population.

Jennifer Montes De Oca, Rachel Leise, Melissa Wiegartner

Faculty Advisor: Mahchid Namazi

"Exploring Narrative Spoken Language in Bilingual Young Adults"

The purpose of this study was to explore the use of fables as a means of eliciting narrative spoken language in young adult bilinguals. Research has shown that fables can be used to extract this genre of discourse in monolingual young adults. This study aimed to shift this focus to bilingual young adults. Subjects were given a questionnaire and administered a brief assessment, the Test of Adolescent and Adult Language, which assessed language in adolescents and young adults. Following this assessment, subjects read two fables and retold the stories. Results of these samples will be presented. Language sample analysis is an important tool used by speech-language pathologists when evaluating bilinguals who may have language disorders.

Stephanie I. Perez

Faculty Advisor: Mahchid Namazi

"Discourse Type and Stuttering Frequency in Adult Bilinguals"

Diagnosing stuttering in bilinguals requires teasing apart normal disfluencies from true moments of stuttering, which poses a significant challenge for SLPs. Research focusing on bilingualism and stuttering is not new, however the effect of discourse type on the frequency of stuttering has not been adequately studied. Research shows that narrative discourse increases the frequency of stuttering relative to conversations. The effect of three different discourse types on the frequency of stuttering in bilingual adult stutterers was explored. Results will show the differential effect of discourse type on the frequency of stuttering and reveal how this information can assist the clinician in the accurate diagnosis of stuttering in bilinguals.

Cori Regan

Faculty Advisor: Sarah Patten

"School-based Speech-Language Pathologist Perspectives of the Common Core Learning Standards"

Strategic alignment of speech-language services to the common core learning standards will improve student outcomes in the school setting. The school-based speech-language pathologists' (SLP) role is to ensure access to the curriculum and improve academic performance (ASHA, 2010). Speech-language services should align to the standards. This study examined why and how we are providing support along with what this service looks like, which could lead to improved academic performance. The purpose of this study was to examine the school-based SLPs perspectives of the learning standards and its role in decision making and planning. A survey was utilized to determine needed evidence-based resources to guide the practice of the school-based SLP.

Stephanie Reed

Faculty Advisor: Sarah Patten

"Effective Social Intervention for Preschool Students with ASD Who are Minimally Verbal or Non-verbal"

Few studies have explored using DIR/Floortime and The Early Start Denver Model(ESDM) to treat early social skills in children with autism who are minimally verbal or non-verbal; therefore, the following research question was developed: Which naturalistic approach improves social skills of children with autism who are minimally verbal or non-verbal, DIR/Floortime or ESDM? The four participants all attended a public school preschool ABA program and received speech and language services. After fifteen treatment sessions of each treatment technique, each student's social skills increased based on data from the Brigance Childhood Screener III and Autism Social Skills Profile. Positive results from this study support the use of DIR/Floortime and ESDM.

Jennifer Russo

Faculty Advisor: Sarah Patten

"Inferential Comprehension Strategies for Students with Language Disorders: Verbal Versus Visual"

Comprehension is crucial for learning. Students with poor inferential comprehension skills have significant difficulty understanding narrative texts. This study used a single-subject research design to examine inference strategies, such as think-aloud and mental imagery, over an eight-week period. The following questions were investigated: (1) What are the benefits of inference training programs, verbal and visual, in facilitating the knowledge-based inference skills for 6th grade students with language disorders? and (2) Does the explicit teaching of inference skills have a positive impact on overall reading comprehension? The data collected was analyzed using thematic analysis. The findings identified the strengths and weaknesses of each strategy.

Jaclyn Savino, Nicole Russo

Faculty Advisor: JoAnne Cascia

"Age Differences in Initiating Clarification Requests of Nonsense Words in Children and Adolescents"

When children and adolescents are presented with information that is unfamiliar to them, they may or may not ask for further clarification or the meaning of the word(s) used. This study investigated children and adolescents ages 3-14 and their ability to request clarification from a speaker when presented with nonsense words embedded in simple "wh-" questions. Eight of the 20 total questions contained nonsense words. Research was conducted in a quiet setting between a single participant and graduate-student researchers. Data was collected on participant responses and was analyzed for age differences using SPSS. All responses were recorded, including when requests for clarification were made. Demographic forms were completed by parents/guardians.

Fatemah Soloki

Faculty Advisor: Joanne Christodoulou

"Games Versus Guided Practice: Methods of Practicing Phonetic Transcription of Vowels"

Games can promote a student's learning by keeping them engaged through interactive tasks, problem-solving, strategy, and competition. Interaction with other students during the game can help a student to make connections between the knowledge to be learned and the application. This study is to compare two groups of students – one participating in a variety of games and the other participating in a series of drills, while both focus on practicing phonetic transcription. Opinions of the students regarding the effectiveness of games or drill method of practice and the resulting aggregate grades will be analyzed. Determining if one method is more advantageous will aid instructors in providing more effective activities in upcoming semesters.

Dana Stickel, Amanda Figueiredo, Cortney McKinney

Faculty Advisor: Mahchid Namazi

"Exploring Expository and Persuasive Spoken Language in Bilingual Young Adults"

The purpose of this study is to describe spoken expository and persuasive language abilities within bilingual young adults. Both expository and persuasive discourses elicit a high level of syntactic abilities and relate to academic success. Subjects were given a questionnaire and administered a brief assessment, the Test of Adolescent and Adult Language, which assesses language in adolescents and young adults. Following the assessments, subjects were asked to describe a game or sport and then convince the listener on a topic of choice. The results of these samples will be presented. Language sample analysis is an important tool used by speech-language pathologists when evaluating bilinguals who may have language disorders.

Melanie Viningauz, Erin Esposito

Faculty Advisor: JoAnne Cascia

"Initiating Clarification of Nonsense Words in Multilingual Children and Adolescents"

This study investigated multilingual children's and adolescents' ability to request clarification from a speaker when presented with ambiguous information. Children and adolescents in the classroom may be missing information that their teacher is presenting when they do not ask for clarification of unfamiliar words/concepts. Research was conducted in a quiet one-on-one setting between a single subject and graduate-student researchers. Subjects were asked a series of simple "wh-" questions. Eight of the twenty total questions contained nonsense words. Researchers collected data on all responses from subjects, keeping record of requests for clarification. Data was analyzed for response differences between bilingual and monolingual children using SPSS. Demographic forms were completed by parents/guardians.

Jennifer Wallin

Faculty Advisor: Sarah Patten

"Dialogic Reading in SLP to Increase Expressive Language Skills in Children with Language Impairments"

Book reading can significantly impact vocabulary and language development. Literature indicates that dialogic reading (DR), a type of shared reading activity, improves expressive vocabulary and language in preschool children. However, much of this research was completed in preschool classrooms. Literacy is within the scope of practice of SLPs. There is limited research regarding DR's effectiveness in speech-language therapy. This study will help fill this gap. A single case design will be used to determine if DR, when provided during therapy, is an effective literacy-based SLP intervention to increase expressive vocabulary and language skills in preschool children with mild-to-moderate language impairments.

COUNSELOR EDUCATION

Alexis Gianna Abate

Faculty Advisor: Adrienne White

"Adolescent Development: The Role of Birth Control on Adolescent Depression"

According to the Centers for Disease Control and Prevention (CDCP), 15.9 percent of females as early as age 15 are taking a hormonal birth control to alleviate symptoms of premenstrual syndrome (2018). However, there has been no longitudinal studies to analyze the long-term effect of oral contraceptives on adolescent development. This presentation will conceptualize the literature and take a further look into how oral contraceptives affect cognitive development, the innate cognitive baseline of female adolescents, and its interconnection to multiple mental health disorders and suicidal ideation in adolescent females.

Amy Lynn Balazse, Maham Tariq

Faculty Advisors: Jane M. Webber, Robert Kitzinger

"Do No Harm: Preventing Trauma Associated with Psychiatric Inpatient Treatment"

Research indicates that institutional trauma frequently occurs in people with severe and persistent mental illness during psychiatric inpatient treatment. To explore this phenomenon, we conducted a systematic literature review that included terms, such as sanctuary trauma and sanctuary harm. We identified emerging treatment protocols and developed a comprehensive list of best practices to prevent further trauma. Interventions include: the safeward model, evidenced-based practices, peer-led models, and early assessment and treatment of existing trauma upon intake.

Ackeem Carto

Faculty Advisor: Michael Bobbitt

"Yes"

The research I conducted was centered around the lack of disclosure and counseling centered around the African American population. Historically, African Americans do not go in for counseling and most view it as a waste of time or as meaningless. The literature review I worked on focused on why that is.

Jennifer Dixon

Faculty Advisor: Katherine Shirley

"The Effect of Mindfulness Practices on Sexual Functioning"

Yoga is a mindfulness-based movement meditation. Only recently has yoga emerged as a treatment of interest, showing preliminary efficacy for a variety of medical and mental health conditions. The mind-body connection of yoga is correlated with neuroplasticity, using breath and movement to regulate emotional and physiological responses, as well as connection. As the acceptance of sexual diversity grows, society too must consider if the medicalization of sexual -elated difficulties must be treated by professionals or if natural complementary alternative medicine treatments are appropriate. Mindfulness-based approaches, including yoga, show promise in treating sexual-based problems in an organic way.

Angelica Clare Kays

Faculty Advisors: Manuel Divino, Linda O'Shea

"Kean University Student Athlete Wellness Center"

The purpose of the Kean University Student Athlete Wellness Center is to provide a safe and relaxing space for student athletes of Kean University. So often, the mental battles these students face is overshadowed by their performance both on the field and in the classroom. Not feeling okay? Fight through it. Experiencing weakness? Be strong. But sometimes, that's just not enough. To perform the best on the field and in the classroom, one needs to feel the best on the inside. Through case study analysis, evidence-based design research, and student interviews, KUSAWC was designed to assist student athletes in embracing private counseling and group therapy, as well as in engaging in the personal fitness center though a salt pool, a unique sensory room, and areas for meditation, which all provide a place to disconnect from all forms of social media and technology.

Jose M. Lowe

Faculty Advisor: Katherine Shirley

"Not Anymore,' A Web-based Tool to Educate College Students on the Risk of Unwanted Sexual Behavior"

New Jersey does not have a statewide sexual violence program for community college students. According to the Association for Student Conduct Administration, unlike senior institutions, community colleges have distinct issues on sexual behavior that affect the two-year college student. Research shows that college students have a permissive view of sexual behavior that is augmented by traditional media and social media. This project will provide data on outcomes of the web-based program "Not Anymore." Community college counselors work with students on various issues, including the education of healthy sexual behavior. Participants will learn how to use the tool to develop psychoeducational workshops for community college students.

Robert Maruca, Jonathan Pintauro

Faculty Advisor: Adrienne White

"Chris Kyle, American Sniper: A PTSD Case study"

Posttraumatic Stress Disorder, also known as PTSD, is a diagnosis that frequently comes up in popular culture and the waiting rooms of mental health agencies. The actual diagnosis, however, is often misunderstood and much more complex. Using the movie, American Sniper, we explored Chris Kyle's life experiences and how they allowed us to diagnose him with F43.10 Posttraumatic Stress Disorder. Through this diagnosis, we developed a case study using the diagnostic criteria required to warrant a diagnosis for Posttraumatic Stress Disorder as listed by the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5). From there, we discuss the relevant specifiers and assessments, as well as an effective treatment plan.

Kareem M. McKenzie

Faculty Advisor: Katherine Shirley

"Military Sexual Trauma: Suffering in Silence"

Military Sexual Trauma (MST) is an aspect of the lived experiences of some military personnel ranging from active-duty, reserve status, or retired members. MST is not a new phenomenon as members of the Armed Services have affirmed their belief that they experienced some form of Sexual Trauma (ST) during their military careers in studies conducted by the Veterans Health Administration (VHA) to understand, identify, and prevent MST. Gurung et al. (2018) found a prevalence rate of 15.7 percent among veterans who identified as members of the LGBT community through meta-analysis of studies on MST and sexual orientation discrimination. This presentation will identify barriers to addressing MST.

Kristal Miller

Faculty Advisors: Jane M. Webber, Robert Kitzinger

"Gang Membership and Adverse Childhood Experiences in African American Male Youth"

A disproportionate number of African American male youth join gangs during their formative years as a means of meeting their basic human, social, and psychosocial developmental needs. This literature review explored the role of risk factors and adverse childhood experiences (ACEs) prior to gang involvement and identified which risk factors, such as a lack of parental connectedness, school performance, community violence, and neglect, increased the likelihood of gang membership among African American male youth. Findings indicate that having a brother or cousin in a gang has a large influence; however, the greatest influence stems from a lack of parental connectedness and experiencing violence in the home and community.

Ashley Morris-Dias

Faculty Advisor: Katherine Shirley

"Racial Disparities in the Reproductive Health of African American Women"

This poster presentation will engage participants in taking a multicultural perspective on how racial disparities today influence the treatment of African American women and their reproductive health. The researcher will review considerations in addressing racism and discrimination in the health care system and explore the biased internalized views that interfere with help-seeking behaviors among African American women. The presenter will assist participants in recognizing multicultural perspectives in order to begin to promote improvements in African American women's mental health, ultimately producing better outcomes in reproductive health for all.

Victor A. Perez Flores

Faculty Advisors: Jane Webber, Robert Kitzinger

"Preparing Counselors to Cope with Vicarious Trauma"

Vicarious Trauma (VT) describes the cognitive, emotional, physical, and psychosocial impact of secondhand exposure to traumatic experiences. Due to the intimate nature of counseling, counselors are habitually exposed to their clients' emotional and explicit details of traumatic events. What then can be done to prevent or mitigate the experience? This exploratory review of the literature inquires into counselor preparation regarding VT and reviews methods available for prevention and coping. The literature search was done using EBSCOhost and Google Scholar. Main themes addressed were teaching about VT, terminology, empathic development, ethical competence, self-care, and supervision.

Eurica Pinthieve

Faculty Advisor: Katherine Shirley

"Fifty Shades of Trauma: The Impact of Childhood Sexual Abuse on Sexual Development"

It has long been reported that child maltreatment and other adverse childhood experiences have long-term lasting effects on children and adults. Felittii et al. (1998) provided a robust body of supportive research that illustrated the strong relationship between early experiences and health, wellness, and life opportunities across one's life span. This author will illustrate the impact of adverse childhood experiences and childhood sexual abuse on one's sexual development. Using the character representation of Christian Grey from Fifty Shades of Grey, the presenter will highlight the emotional neglect, physical abuse, and sexual abuse that he experienced during his adolescent and teenage years and its impact on his sexual development.

Cindy Povall

Faculty Advisor: Katherine Shirley

"Effects of Pornography on Adolescent Thoughts and Sexual Behaviors"

TedMED's presentation by Emily F. Rothman introduced potential positive impacts of pornography on adolescents, which can manifest as a positive affirmation in sexual affiliation, educational information on sexual anatomy, and satisfaction with their own sexual body parts. A literature review was conducted to examine additional effects of pornography on adolescent thoughts and sexual behaviors. The researcher found contrasting data about potential benefits and risks that may occur simultaneously in relationship to a continuum of pornography usage. For example, excessive pornography use may lead to sexually aggressive behavior and dating violence. Interventions to dissuade the use of pornography and its negative effects will be presented.

Tennille Raney

Faculty Advisor: Jane M. Webber

"Counseling Mothers of Black Males: Contextual Implications for Vicarious Trauma Treatment"

Considerable research has focused on the racial trauma experienced by Black males in America. However, this research often ignores the vicarious trauma experienced by mothers of Black males undergoing these racially traumatic experiences. Using autobiographical narrative, cultural ethnography, and a preliminary review of the literature, I explored vicarious racial trauma experienced by mothers of these males, as well as child-rearing decisions made as a result of these traumatic experiences. I also identified counseling recommendations for healing within the clinical setting to address the concerns of this overlooked population.

Maximina Rivera

Faculty Advisor: Jane Webber

"Recovery Housing: One Model of Consistent Support for College Students"

Individuals in recovery from substance use receive traditional support from rehabilitation facilities. As college students they seek supplemental support in the college environment process through which individuals improve their health and wellness, Recovery housing at institutions of higher education are providing support services and environments that enhance the student's development and academic success. This study will review one model of recovery housing that provides consistent support to students in recovery housing.

Markim A. Shakur-Purvis

Faculty Advisors: Jane M. Webber, Robert Kitzinger

"Recognizing Justice System-induced Trauma in African Americans"

This study explored how African Americans experience justice system trauma in the United States.This literature review examined historical racial injustice inclusive of traumatic cross generational experiences of convict-leasing, brutality, racial profiling, disparate sentencing, mass incarceration, and police killings of unarmed African Americans. The results show a justice system experience that induces trauma and retraumatizes African Americans on a continuum. I proposed a trauma-informed solution for assessing trauma in the justice system that fosters criminal justice reform and establishes a process that abides by the ethical duty to do no harm.

Rosanne Tobey

Faculty Advisors: Robert Kitzinger, Jane Webber

"Group Counseling as a Viable Intervention for Treating the Effects of Trauma in Children"

Group counseling is a versatile intervention that lends itself to addressing various issues within a range of client populations. Given the impact of trauma, counselors should integrate group counseling into trauma treatment with children. After an exploratory review of the literature, findings suggest that the flexible nature of this format allows for the creation of age-appropriate groups and activities including play therapy, psychoeducation of feelings management, and mindfulness activities. Group counseling can be designed around a trauma-informed structure to assist group members in restoring their narrative and has been used effectively in the school setting and with children of differing ages.

Wilson Wai Bong Ng

Faculty Advisor: Katherine Shirley

"#Gear365: How an Online Community Promotes Positive Mental Health for Kink-Identified Individuals"

Sexual minorities face challenges that affect mental health, such as discrimination, isolation, and minority stress. In addition, kink-identified individuals cope with prejudices, misunderstandings, and stigmatization of this aspect of their sexuality. Sprott and Hadcock (2018) indicated the importance of community and social support among these individuals. Through phenomenological research of open YouTube videos, this study presents results of experiences from individuals who benefited from being a member of an online kink/gear fetish community called #Gear365 and the correlations to positive mental health, social support, and acceptance, while raising counseling knowledge and awareness of kink-related communities and resources.

Wilson Wai Bong Ng

Faculty Advisor: Katherine Shirley

"LGBTQ+ College Student Services: A Case Study of Inclusion and Support"

Current research shows that individuals coming out and self-disclosing as LGBTQ+ are becoming younger, well into the age range of traditional college students. Colleges and universities in the United States are addressing this trend by increasing their inclusion of LGBTQ+ students through expanded services, policies, and resources. How do college student services support an increasing LGBTQ+ student population? To answer this question, I applied Cass's theory of the LGBTQ identity model to a case study of a Northeast US college and identified services, support, opportunities, and resources offered by an LGBTQ Center to strengthen LGBTQ+ student identity development.

Palak Vaidya

Faculty Advisors: Jane M. Webber, Robert Kitzinger

"Suicide Attempts Among Adolescents in India During Board Examinations"

Indian students must participate in nationwide "board examinations" in tenth and twelfth grade. Intended as an indicator of potential future careers, these standardized tests may be significant sources of stress and anxiety, not only for the student, but also for family members and teachers. With suicide rates among the highest in the world, combined with a rapidly growing population, India faces a serious mental health crisis. This poster provides a preliminary review of research investigating student suicide before, during, and after the board examinations and offers recommendations for assisting students in need as well as teachers and family members through direct counseling interventions.

EDUCATIONAL ADMINISTRATION / LEADERSHIP

Zarna Shah
Faculty Advisor: Rafael Inoa

"Standardized Testing in New Jersey: Perceptions of District Level Administrators"

In the United States, standardized testing has been a part of the school system for over four decades. Since 1975, NJ has stayed in the forefront of standardized testing and its implementation. The Partnership for Assessment of Readiness for College and Careers (PARCC) was created to measure students' ability to apply their knowledge of concepts, focused primarily on high-level thinking skills. In 2019, PARCC was amended and the New Jersey Students Learning Assessment (NJSLA) was born. It is not known how, if at all, this move from PARCC to NJSLA has influenced school districts across the state. The current study aims to better understand district-level administrators' perspectives on the implementation of standardized testing in NJ.

Zarna N. Shah, Lisa Martin, Racheal Herrington, Irina Nikitovic
Faculty Advisor: Efthimia Christie

"The Impact of Title IX on Women Leaders"

Throughout history, women have experienced gender discrimination and sexual harassment. Since the feminist movement during the 19th and 20th centuries, there have been several attempts towards equalization with male counterparts. The purpose of this presentation is to discuss the impact of Title IX on women in leadership in the 21st century, with an emphasis on immigrant and minority women and female millennials today. Title IX of the education amendments of 1972 to the Civil Rights Act of 1964 was enacted to level the playing field in political and social opportunities for women in the United States. Our discussion will focus on the benefits and the role this legislation has played in the equalization for women in different sectors such as sports, employment, and education.

Cheryl Lundy Swift
Faculty Advisor: Rafael Inoa

"Culturally Proficient Practices that Build School to Home Partnerships in a High Minority Community"

Many studies indicate that family involvement correlates to positive student outcomes, regardless of ethnic background or socioeconomic status. Despite the positive correlations, schools struggle to partner with minority and low-income families. The aim of this case study is to identify practical strategies and policies to build and maintain strong school-to-home partnerships in a high minority and socioeconomically disadvantaged community. This study examines the behaviors and beliefs of stakeholders, as well as barriers to developing effective school-to-home partnerships at a New Jersey elementary school. The cultural proficiency framework is used alongside stakeholder interviews to determine practices that engage effective partnerships.

NURSING

Maren Breining, Helene Leonard
Faculty Advisor: Ibtihal Almakhzoomy

"Purposeful Rounding and the Impact on Patient Fall Rates"

Objective: The aim of this study is to determine the impact of purposeful rounding on patient fall rates. Background: Purposeful rounding is a personalized approach on patient rounding where the frequency of rounding is established between the primary nurse and the patient. This is a deviation from the industry's best practice approach. Method: The study is a retrospective cohort study of longitudinal design. Fall data will be collected and analyzed from one year prior to implementation and two years after implementation of purposeful rounding. A paired-sample T-test will determine the difference between patient fall rates pre-intervention and post-intervention. Results: Findings should reveal a decrease in fall rates.

Lilian Duru
Faculty Advisor: Denise Nash

"Understanding the Progression from Vaping to Cigarette Usage in Adolescence"

The alarming rise of e-cigarette initiation and usage among adolescence has incited increased concern. The aim of this systematic review is to explore the evidence discussing the prevalence of e-cigarette initiation and use among adolescents and to identify if there is a relationship with e-cigarette usage and combustible cigarette dependency. The research question guiding this review is whether the adolescents who vape have higher incidences of habitual combustible cigarette usage than the adolescents who do not vape? Method: The research study was conducted utilizing the Kean University library database including CINAHL. The literature suggests that there is an increased prevalence of initiation and use of e-cigarette among adolescents that progress to combustible cigarette usage. Among the reasons for initiation include curiosity, social media exposure, and discreteness. Through continual antismoking campaigns and education at elementary level, initiation and usage may be minimized.

Hallie Garrett, Mona M. Dauphin, Amirah Walker
Faculty Advisor: Ibtihal Almakhzoomy

"Investigating Health Promoting Behaviors in Long Term Care Nurses"

The purpose of this study is to identify the nutrition and physical activity patterns among nurses. Fifty-four percent of nurses are obese (NIH). Workplace conditions have been attributed to their poor dietary practices and reduced physical activity among nurses. They lack the motivation to lose weight, exercise, or consume a recommended daily intake of fruits and vegetables to maintain a healthy weight. A sample size of 40 nurses from a skilled nursing facility will answer a 30-item questionnaire containing a demographic data form and two subscales (nutrition and physical activity) of the Healthy Lifestyle Profile (HPLP II). Descriptive analysis will be performed via SPSS.The study adds to the existing knowledge on nurse health behavior patterns.

Rose Raymond, Oluwole Oderinde
Faculty Advisor: Ibtihal Almakhzoomy

"Self-Management Practices of Chronic Conditions Among Racial and Ethnic Minority Populations"

The purpose of this systematic review is to identify the state of research on the best combination of patient interventions to promote patient engagement and activation for self-management in chronic illness under faculty mentor guidance as part of a larger funded project. The focus is on preventative interventions among racial-ethnic minority groups in a community setting compared to usual care. Using the PRISMA framework, the inclusion criteria involves empirical studies published in English between 2006 and 2020, which used samples of adults 18 years and older with chronic conditions. Exclusion criteria involve studies that address interventions on pharmacological management or health care providers. Outcomes include intermediate and process outcomes.

Jessica M. Rivera, Lindsay B. Fehring
Faculty Advisor: Ibtihal Almakhzoomy

"An Investigation of Perceived Stress and Meditation Practices Among Registered Nurses in Acute Care"

Reducing nurses' stress levels leads to improved outcomes and promotes safety. The purpose of this study is to determine whether mindfulness meditation can reduce their stress levels. A convenience sample of acute-care registered nurses will be recruited from Jersey Shore University Medical Center (JSUMC) with the approval of the Kean University IRB and the JSUMC IRB. The Perceived Stress Questionnaire, containing a 30-item Likert scale, will be given prior to the intervention and after the two-week period. Data will be analyzed with Excel using descriptive and inferential statistics. Paired t-tests will compare the differences in perceived stress before and after the intervention; the findings may have important implications for education, practice, and research.

Rose Tarantino
Faculty Advisor: Denise Nash

"Can Using Mid-line Catheters as Opposed to PICC Lines Decrease Bloodstream Infections in the CCU?"

Peripherally inserted central catheters are routinely the first intravenous access used when a patient is admitted to the critical care unit. PICC lines are beneficial for long-term intravenous antibiotics, nutrition, medications, and blood drawing. The purpose of this systematic review is to explore the evidence regarding the use of midline catheters in place of PICC lines to decrease infection. The research question guiding this study is: when caring for a patient in the critical care setting, does the use of a midline catheter as opposed to a peripherally inserted central catheter, decrease the risk of bloodstream infections? The research study was conducted utilizing CINAHL, PubMed, and MEDLINE via the Kean University Library Database using keywords. The results obtained from this study suggest that the use of midline catheters has a lower risk of bloodstream infections than the use of PICC line catheters.

OCCUPATIONAL THERAPY

Kaila Blumenthal, Cesar Cercenia, Valerie Swan
Faculty Advisor: Claire Mulry

"Outcomes of a Health and Wellness Program for Older Adults: Nonprofit/ University Collaboration"

By 2030, the number of adults older than 65 will reach 1 billion, or 12 percent of the projected total world population (Roberts, Ogunwole, Blakeslee, & Rabe, 2018). With 85 percent of older adults wishing to age in place, novel approaches must be made to meet their needs (U.S Department of Health and Human Services, 2016; Leland & Elliott, 2017). This study examines a collaboration between Kean University fieldwork students and a nonprofit organization. Retrospective and prospective data were used to understand the students' impressions of the experience's impact on their learning, amount of clients served, services, and equipment provided. This study analyzed the outcomes to see challenges and successes in creating experiential fieldwork that meet societal needs.

Sergio DeAlmeida, Kathy Paterson, Casey Kapotes, Alexandra Stavropoulos, Deondra Leaky
Faculty Advisors: Jennifer Gardner, Robert Kitzinger

"Relationship Between Sensory Preferences, Habits, and Routines of Individuals with SUD in Early Recovery"

The purpose of this proposed study is to explore the potential correlation between sensory preferences and the habits and routines of individuals with substance use disorder (SUD) in early recovery. This research was conducted through an exploratory, non-experimental quantitative design. All participants were recruited from an intensive outpatient treatment program for substance use disorders in Central New Jersey. Data collection consisted of a demographic survey, daily occupational questionnaire, and adult sensory profile. This research is currently being conducted and, as a result, no results can be described in detail until all data is collected and analyzed.

Nicole Deinzer, Samantha Krych, Anabelle Vilbrun, Kelly Malanga, Chad Vasquez
Faculty Advisor: Mariann Moran

"Efficacy of Kean University Pediatric Occupational Therapy Groups"

The purpose of this study is to determine the efficacy of the Kean University Occupational Therapy Community Cares Clinic groups for preschoolers attending a local daycare center. Addressing physical and cognitive difficulties at a young age is vital to the future development of children. Thus, programming was designed to address visual perception, attention, and motor skills to increase the childrens' participation in classroom settings. Data collected from surveys and intervention screenings will be analyzed to identify changes in these skills. We expect to find improvements in these skills after participating in these groups. The findings of this study will be utilized to improve programming and help determine additional needs.

Selina Delgado, Lauren Meierdierck, Claudia Salinas, Amelia Chulyakov
Faculty Advisor: Claire Mulry

"An Exploration of Caregiving on Individuals' Health, Quality of Life, and Occupational Participation"

This phenomenological study explores caregivers' perspectives of their health, quality of life, and occupational participation. Current qualitative and quantitative studies do not capture the lived experience of caregivers. This study utilized semi-structured interviews in order to develop a deeper understanding of caregiver needs. The findings of this study yielded information that enables clinicians to design more client-centered treatment plans aimed towards reduction and/or prevention of future caregiver burden. In total, four caregivers participated in two phases of semi-structured interviews.

Stephen Edelstein, Randee Myers, Samantha Kantor, Chanecia Allen, Karissa Brand, Nadiia Dautruche-Tingling
Faculty Advisor: Mariann Moran

"How Do Technological Advancements in Food Purchasing Impact the Older Adult Population?"

Can the way in which older adults purchase food impact their quality of life? While it may seem that online food shopping would have a positive impact on older adults due to the elimination of crowds and standing in long lines, there is no research to indicate that those who shop online have a better quality of life than those who do not. Employing an exploratory study design, researchers gathered information through surveys on seniors' use of food purchasing technology and its impact on quality of life. The surveys were distributed to 93 participants from four senior centers in Union County. Preliminary results show that most seniors are not using technology to purchase food. Instead, they are shopping in-person or delegating the task.

Manar Hussein, Susanna Inglin, Anat Spiero, Michelle Colas, Maria Del Mar Rivera
Faculty Advisor: Jennifer Gardner

"Impact of Web-Based Application for Care Managers on Occupational Performance"

This quasi-experimental study's purpose is two-fold: 1) to explore food, housing, and transportation barriers and how they impact occupational performance; and 2) to investigate the effect of a care management clinical reasoning app to address barriers on occupational performance and satisfaction. Participants were adults with mental illness in the community. One group received intervention using the app, and one group received intervention without. Participants' occupational performance and satisfaction are to be measured using the Canadian Occupational Performance Measure (COPM) before and after intervention; demographics are to be collected. Data are to be analyzed to test for significant changes in ratings before and after intervention and between the groups.

Courtney Maxwell, Caitlin Herod, Emma Kaplan, Meghan Loughman, Abigail Seidman
Faculty Advisor: Mariann Moran

"The Lived Experience of Campers and Their Parents/Guardians at a University Transition Camp Program"

Many young adults with autism spectrum disorder pursue post-secondary education, however, the success rate for completion of this education is low (Newman et al., 2011). The goal of our research was to evaluate the effectiveness of an occupational therapy summer camp held at a university. This camp was designed for young adults with ASD and other special needs to assist in their transition to secondary education. Moreover, our study explored the lived experience of campers and their parents/guardians who participated in the camp, evaluating the program for improvement. A mixed-methods study, including interviews of participants and analysis of pre and post-camp survey data, was used to evaluate the impact and effectiveness of the camp.

Dhara Patel, Kimberly Theobald, Julia Addesso, Therese D'Adezzio, Kyla Vacchio
Faculty Advisor: Laurie Knis-Matthews

"Exploring the Perception of Time Without Permanent Housing"

According to the National Alliance to End Homelessness, 567,715 people were homeless in the US in 2019. Through in-depth interviews, the researchers sought to answer this question: "how do people who lack permanent housing perceive time?" This study uses a qualitative method to explore the unique experiences of 5 individuals who have been homeless and how they perceived their time during that period of their lives. There is a strong need for a thorough understanding of this topic to demonstrate an accurate portrayal of the lived experiences of the homeless population. The goal of this study is to go beyond the definition of homelessness and gain a deeper understanding of the phenomenon itself.

PHYSICAL THERAPY

Jinal Patel, Gabriella Fama, Jenna Tucker, Timothy Marshall
Faculty Advisor: Thomas Koc

"Physical Therapy Management of a Patient with Postural Orthostatic Tachycardia Syndrome: Case Report"

The purpose of this study was to monitor and to explore subjective and physiological responses based on multimodal treatment interventions to manage symptoms, improve function and decrease episodes of syncope in a patient diagnosed with POTS. The patient is a 23 year old female with a primary diagnosis of POTS. During the third phase of physical therapy, rest breaks were varied based on patient response to interventions. A decrease in rest break frequency resulted in a reduction of symptoms, primarily intensity of dizziness/light-headedness. The outcomes suggest that a decrease in rest breaks may contribute to a reduction of symptoms associated with POTS. Further research is needed to support this treatment approach in the physical therapy management of POTS.

SCHOOL AND CLINICAL PSYCHOLOGY

Emily Breen, Ava Atana Ramsundar
Faculty Advisor: Aaron Gubi

"A Thematic Analysis Examining Trauma and Trauma-Informed Care Research in School Psychology Journals"

The current study is aimed at better understanding the state of trauma-based inquiry within school psychology. Recent inquiry suggests that school psychologists hold little knowledge, education, training, confidence, or competence with trauma-informed assessment, intervention, or consultation practices in schools (Gubi et al., 2019). Nine journals covering the field of school psychology were analyzed. Articles ranging from 1998-2019 that focused on either single incident traumatic events or interpersonal/complex trauma from these journals were examined. Articles were included if they fit any type of trauma and are of professional practice (i.e., assessment, intervention, consultation). Two authors independently evaluated the nine journals and articles for inclusion. A thematic qualitative analysis was used to determine categories and exploratory themes among the selected journal articles.

Samantha Farese, Kristine Van Emburgh, Paul Oleniec, Cristina Manochio
Faculty Advisor: Keri Giordano

"What makes a charter school effective? The Impact of Relationship Quality on Academic Outcomes"

Preliminary studies have found evidence supporting a relationship between administrator support and student achievement, as well as teacher job-satisfaction and other positive outcomes (Lambersky, 2016; Lesinger et al., 2018; Liebowitz & Porter, 2019). This study aims to examine the impact of relationship quality on academic outcomes in an urban charter school. Teaching staff (n=25) will be invited to complete an online survey evaluating perceptions of relationships in their school, which will be compared to academic outcomes measured by the NJ School Performance Report. Presenters will discuss how the results of the study can be applied in other charter school settings to help enhance success.

Kristine Van Emburgh, Paul Oleniec, Samantha Farese, Cristina Manochio
Faculty Advisor: Keri Giordano, Steven LoCascio, Rafael Inoa

"What makes a charter school effective? Examining teacher and parent perceptions of climate, culture,"

US schools, especially charter schools, have failed to distinguish themselves as educational frontrunners (Coe, 2009; Perie et al., 2005). A positive school climate may mitigate the effects of low socioeconomic status on student outcomes and create an atmosphere in which students are free to experiment and learn (Fredericks et al., 2019; Hopson & Lee, 2011; Kwong & Davis, 2015). This study aims to examine teacher and parent perceptions of the climate, culture, and values in an urban charter school. Approximately 30 teachers and parents will be requested to participate in focus groups. Presenters will discuss how results may help schools with vulnerable populations make changes that could aid in increasing their quality.

Danielle Fishbein
Faculty Advisor: Adrienne Garro

"Parent and Child Quality of Life and Flexibility in Families Affected by Pediatric Food Allergies"

The present study seeks to examine the relationship between child and parent QOL in pediatric food allergies, with consideration for the possible moderating role of parents' psychological flexibility. To date, psychological flexibility has not been specifically examined in parents of children with food allergies. The current study is collecting data via an online survey from parents who have a child with a food allergy, ages birth-18 years. The results from this research will be beneficial in understanding the connections between child and parent QOL and also in understanding the potential effects of psychological flexibility on QOL. These results may be valuable in shaping evidence-based psychological interventions for these families.

Danielle Fishbein, Vanessa Vega
Faculty Advisor: Adrienne Garro

"Child food allergies: Understanding Parent Gender, Allergy Severity, and Psychological Flexibility"

The present study examines the relationships between parent gender, child allergy severity, and parent psychological flexibility. This study collected data from families with children who had food allergies, via an online survey including a) Food Allergy Quality of Life Parental Burden Questionnaire (FAQL-PB) (Cohen, Noone, Munoz-Furlong & Sicherer, 2004); b) the Acceptance and Action Questionnaire-II (AAQ-II) (Bond et al., 2011), which assesses psychological flexibility; and c) demographic questions. Data collection is currently ongoing. Multiple linear regression and correlational analyses will be used to better understand the relationship(s) between variables.

Gittie Freeman, Ava Atana Ramsundar, Henessys Paulino
Faculty Advisor: Keri Giordano

"Relationship Between Child and Administrator Race and Reasons Cited for Expulsion and Suspension of Children"

Implicit bias, or unconscious thoughts/beliefs that impact our attitudes and behavior, may play a role in the suspension and expulsion of young children from early learning settings. Recently, it has been reported that Black children are over three times more likely to be suspended (U.S. Departments of Health & Education, 2016) and twice as likely to be expelled (U.S. Department of Education Office for Civil Rights, 2016) when compared to their White counterparts. The relationship between race and the cited reasons behind these suspensions and expulsions has not yet been examined. The present study will examine data from 368 community childcare centers to determine if there is a relationship between child race and the reason cited for suspension and expulsion.

Ayal Goldberg, Shira Engelberg, Mike O'Kane
Faculty Advisor: Keri Giordano

"The Impact of Program Characteristics on Expulsion Rates in Community Childcare Settings"

This study examined programmatic and staff characteristics in New Jersey community childcare centers in connection with expulsion practices surrounding infants and young children. Data was analyzed from 368 community childcare facilities in NJ. Faculty years of experience and educational level was measured against rates of expulsions. Program factors that were assessed include accreditation status, Quality Improvement Rating System (QRIS) participation, policies, ratios, and available support in connection with rates of expulsions. Data showed that participants of New Jersey's QRIS were significantly more likely to expel children. None of the other factors were significant predictors of expulsion.

Victoria Interra, Giuliana Stillo, Angel Mims
Faculty Advisor: Keri Giordano

"Associations Between Child and Administrator Race and Suspension and Expulsion Rates in Community Childcare Programs"

Preschool expulsion has been receiving national attention. Preschool children have been found to be both suspended and expelled at higher rates than school-aged children (Cutler & Gilkerson, 2002; Gilliam, 2005; Gilliam & Shahar, 2006). Specifically, Black preschoolers were 3.6 more likely to be expelled than their white counterparts (U.S. DOE, 2016). Administrators of licensed childcare centers in the state of New Jersey received an email invitation to complete an online survey describing their suspension and expulsions practices. This poster examines data from 368 NJ community childcare facilities. The disproportionality of suspensions and expulsions is discussed and the impact of director race on suspension and expulsion practices is examined.

Oscar Kosecki, Gabrielle Denicola
Faculty Advisor: Aaron Gubi

"Examining Knowledge of Trauma-informed Care Among Graduate Students in School Psychology"

Research has acknowledged the need for trauma-informed practices within schools, yet very few studies exist on how to establish or support such practices (Gubi et al., 2019). School psychologists distinctly hold the specialized behavioral health training to facilitate trauma-informed care practices. However, little is known regarding the training and preparation of future school psychologists to engage in trauma-informed care practices. In the current study, graduate students in school psychology will be sent online surveys examining their knowledge, beliefs, competencies, and expected preparedness to engage with trauma-informed practices within the schools. All participants will be graduate students, enrolled in school psychology training.

Jonah McManus, Nnamdi Uzoaru
Faculty Advisor: Jennifer Block-Lerner

"Mindful Heart: How Mindfulness and Demographics Predict Satisfaction with Life and Self-Compassion"

Mindfulness practice highlights living in the moment and bringing kind awareness to thoughts, emotions, and bodily sensations. It is utilized less in under-served populations; exploration of reasons for limited access and/or receptivity is warranted. Further, dispositional mindfulness may impact how individuals experience mindfulness-based interventions. The purpose of this study is to examine how mindfulness and demographic variables predict responses to an emotionally evocative film, with and without a mindfulness practice beforehand. These responses were measured with satisfaction with life and self-compassion scales before and after the film and at a one-week follow-up. Results and implications for future research will be discussed.

Sam McSpiritt, Dana Mattioli, Victoria Garcia
Faculty Advisor: Kendahl Shortway

"Gender Nonbinary Athletes: Perspectives of NJ High School Coaches and Athletic Directors"

To gain an understanding of how coaches and athletic directors perceive gender nonbinary athletes and their sports team participation, we are recruiting a sample of NJ high school coaches and athletic directors to complete an online survey. Each participant will read a hypothetical vignette about an athlete who identifies as gender nonbinary. Half will read a vignette about an athlete who wants to join their team and half will read about an athlete joining the opposing team. Participants will rate their agreement to statements about the athlete's sport participation. Findings will inform us about participants' perspectives, which are relevant to the issues and challenges that gender nonbinary high school athletes may encounter.

Michael O'Kane
Faculty Advisor: David Brandwein

"Exploratory Analysis of SASSI-4 Protocols Obtained During Local Forensic Evaluations"

The Substance Abuse Subtle Screening Inventory–4th edition (SASSI-4) is a screening tool used to aid in identifying individuals with a high probability of having a substance use disorder (SUD). Using subtle items, not specifically mentioning substances, is useful to identify individuals unwilling to acknowledge their SUD (Laux et al., 2012). A database of SASSI-4 reports obtained during local forensic evaluations conducted by a licensed psychologist was created. Preliminary data analysis shows that the current sample is 78.6 percent female, with ages ranging from 25-46. Results indicated that 57.1 percent of the sample has low probability and 42.9 percent has high probability of having a SUD. After future data collection, additional analyses will be run regarding predictive factors.

Maureen Sessa, Benjamin Foote, Jonathan Mintz
Faculty Advisor: Jennifer Block-Lerner

"Ecological Momentary Intervention and Assessment to Extend the Dose of Mindfulness-based Interventions"

Psychosocial difficulties are prevalent for college students; opportunities to address these without additional scheduling or financial commitments are necessary. One avenue is curriculum-based interventions, centered around skills for coping with college and broader life demands. While potentially helpful, these represent a low-dose service that may require additional components to instill sustained effects. This study examines the impact of four mindfulness-based prompts sent weekly via text after a workshop. Ecological momentary assessments (EMA) from 147 undergraduate students assessed whether the prompts extended impact. The study also speaks to the feasibility of EMA for studying behavior in real-world contexts.

Richard LaTourette, Sadaysia Baker, Emily Breen, Victoria Interra, Sarah O'Rourke
Faculty Advisor: Keri Giordano

"Availability of Psychologists in New Jersey for the Birth to Five Population"

It is estimated that nearly one in four children between the ages of birth and five are at risk for a developmental, behavioral, or social delay (National Survey of Children's Health, 2011-12). Although a lack of early intervention can have long-term negative impacts on overall development, the birth-to-five population have traditionally been under-served (National Scientific Council on the Developing Child, 2012). Data related to the availability of services for this population was collected by calling 2,341 licensed psychologists in the state of New Jersey and administering surveys. Responses from 286 psychologists from across the state were analyzed. The results indicate a lack of available services for this population. Barriers to treatment and the implications are explored.
Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

Stephanie K. Vorilas, Anthony Fortuna
Faculty Advisor: Keri Giordano

"Examining Teacher Social-Emotional (SE) Competence and its Relationship to Classroom and Student SE"

Can teachers model for their students skills that they themselves do not possess? Research supports that when social-emotional skills are taught early on, children are more likely to experience more positive developmental outcomes. The present study aims to answer the question of how a teacher's own level of social-emotional competency impacts the social-emotional functioning of the children they teach, as well as the quality of relationships with their students. More specifically, the following areas will be examined through self-report and observational measures: level of teacher social-emotional competency; individual child levels of social-emotional functioning; and the quality of the relationship between the teacher and the students.

Daniel Watson, Christina Galese
Faculty Advisor: Kendahl Shortway

"Maturation and Attitudes Toward Mental Health Among a Sample of Division III Student-Athletes"

The National Collegiate Athletic Association (2014) found that the top concern of student-athletes is mental health, and has since prioritized related initiatives. Student-athletes often feel stigma, however, the influence of maturation within the athletic context is less well-understood. The purpose of this study is to investigate the relationship between class year, attitudes toward mental health, and willingness to seek services. Seventy-three student-athletes from a public Division III university completed a demographic questionnaire and the Sport Psychology Attitudes-Revised Form (SPA-R). Increased understanding of this association may inform psychological interventions tailored to the developmental level of student-athletes.

Lindsey Wilkinson, Emily Sauer, Marissa Destefano, Arika Aggarwal
Faculty Advisor: Kendahl Shortway

"Interprofessional Grand Rounds: Providing Informed Healthcare to Survivors of Sexual Assault"

Envision over 100 Kean University graduate students representing various healthcare professions working together to consider assessment and treatment implications of a hypothetical case presentation of a survivor of sexual assault. The interprofessional grand rounds presentation will raise awareness of the importance of understanding unique needs of survivors and how healthcare professionals can be better prepared to respond to and meet such needs. Researchers will assess the current training and education of graduate students as it pertains to working with survivors, evaluate the presentation format and delivery, and assess the impact of the presentation on participants' clinical work and education or training intentions.

SOCIAL WORK

Jonathan Adams
Faculty Advisor: Maureen Himchak

"Self-Injurious Behavior in Collegiate and Professional Athletes"

This study is needed to help athletes that are still playing or have retired to get the help that they need. The physical impacts of elite sport participation have been well documented; however, there is comparatively less research on the mental health and psychological wellbeing of elite athletes.The purpose of this study is to describe and analyze the factors of head trauma, depression and suicide/ suicidal thoughts through secondary analysis of existing data from the survey (Sports Related Concussion, Suicide in National Collegiate Athletic Association; NCAA). By researching these factors, the researcher will bring attention to the concerns of self-injurious behavior among collegiate and professional athletes and mental health in sports.

Angelica Calero
Faculty Advisor: Maureen Himchak

"Suicide Among PTSD Veterans"

The purpose of this study is to analyze the factors of combat and deployment, limited access to care and social stigma on mental health. In spite of the widespread policy interest and a committed response from DOD and the VA, there is still a need to close the gap and initiate unbiased data to communicate better policies and programs for arranging their needs. Veterans are among the highest in terms to suicide of 22 a day and continue to be underserved and marginalized. Understanding veterans barriers can help better assist them in the battles they bring from their selfless service.

Catherine Clemente
Faculty Advisor: Roxanne Ruiz-Adams

"Self-Care: A Single System Design"

The researcher sought to examine the effects of mindfulness interventions in the amount of anxiety experienced by the participant. The researcher hypothesized that the mindfulness interventions utilized would reduce the amount or intensity of anxiety experienced by the participant. The methods utilized in this study include a 1 week daily record of baselining and a 1 week daily record implementing the mindfulness interventions. Through this single system A-B design the researcher found a reduction in the intensity of anxiety experienced by the participant. Such research is important because anxiety is frequently experienced and when untreated can have numerous far reaching negative effects.

Christina Gonzalez, Samantha Rosenhouse, Natasha Escudero, Rosemary Pena, Kelsey Kozick
Faculty Advisor: Maureen Himchak

"Dolores Vallelonga: The Moral Compass"

Relationships can be affected by a multitude of things, including values, personality traits, etc. Green Book shows Dolores and Tony Vallelonga's marital strain when he loses his job. Although this is one contributing factor, it does not fully explain why there is tension in the relationship. This study's purpose was to determine the contributing factors of their marital strain through Dolores' point of view. A multitude of engagement skills, assessment approaches, and interventions were used to determine what were the main contributing factors to Dolores and Tony's marital issues. Results showed that the main factors were Tony's lack of responsibility and a difference in values, and that the interventions improved their relationship.

Kristine Lescano, Desiree Rodriguez, Howa Camara, Una Setshwane
Faculty Advisor: Maureen Himchak

"Don Shirley's Greenbook Journey"

The purpose of this research was to assess pianist Dr. Don Shirley from the film Greenbook. He is self-actualized and lives in an environment full of biases as an African American man. Social Work students examined the context in which Don lives and interacts as a wealthy, African American man. Don struggled with living in between two worlds: one world was where he was a wealthy man living in New York City and the other was a man playing in the segregated South in the face of stereotypes. Social Work students utilized the change process which included Engagement, Assessment, and Intervention strategies. Results demonstrated that Don Shirley's self-concept developed throughout the movie utilizing a care plan and motivational interviewing.

Shaniqua Murray, Asia Garner, Chaiylah Quinn, Laura Exius, Shirley Rejouis
Faculty Advisor: Maureen Himchak

"Frank Anthony Vallelonga 'Tony Lip'"

Intro Social workers will work with a variety of people with different issues. The issues presented in The Greenbook with Tony Lip are present issues that still arise today such as racism, gambling issues and simply the lack of respect and values for others. It is the role of the social worker to be able to apply the right tools to help the individual and to advocate for those in need. As social work students we chose to evaluate the character Tony Lip and research the social work values, competencies and ethics. Purpose & Hypothesis Purpose: To examine Tony's lack of cultural competence. Hypothesis: How does Tony's presenting issue affect his overall social skills and daily interactions with individuals of different ethnicities than him?
Research supported by: Research Recruits program, Kean University

Andrea Cecile Servil
Faculty Advisor: Maureen Himchak

"Homelessness Among Incarcerated Men of Different Ethnic Groups"

The National Association of Social Work identifies six code of ethics which should be implemented to guide social work practice. Establishing a basic commitment to the dignity and worth of the person; the homeless and incarcerated population in the United States are viewed as underserved. Unemployment and homelessness are two major concerns that are affecting the lives of African American men that were previously incarcerated. The research investigated the factors that contribute to lifelong homelessness and incarceration, whether homeless individuals are more or less likely than non-homeless to receive different charges in the criminal justice system, and if they receive longer sentences.

Fione Tsatskin, Caryn Mangina, Lauren Rosenfield, Sarah Delicio
Faculty Advisor: Maureen Himchak

"Greenbook: Cultural Diversity Explored"

The purpose of our research was to examine the impact of cultural exposure on Tony Lipp from the film Greenbook. Tony is an Italian-American bouncer who becomes an assistant to successful pianist, Dr. Don Shirley. His lack of cultural awareness caused him to struggle with understanding Don Shirley's mannerisms, behaviors and cultural obstacles. Social work students used the CBT approach to help Tony gain insight on the reasoning behind his lack of awareness and personal bias towards African Americans. Social work students utilized the change process which included Engagement, Assessment, and Intervention strategies.The results displayed that Tony Lipp's recognition of bias along with exposure and adaptation, expanded his cultural awareness.

Jadielle Wright, Allison Speranza, Erica Carter-Wood, Carla Hollinger, Ifeoma Onyekwelu
Faculty Advisor: Maureen Himchak

"Dignity Prevails Over Violence"

Racism and oppression were prevalent in the early 60's and this adversely affected the black community. The impact of racism could be seen in families' values and how they interact in their environment. Social workers need to be culturally competent and understand that dealing with their own racial bias is crucial to effectively dealing with the families they serve. Utilizing content analysis, social work students chose the character Dr. Shirley in the movie Greenbook and evaluated NASW core ethics and values and recently learned modality. The purpose of this research is to examine Dr. Shirley's experience with racism. The results showed that Social Workers can utilize person in environment theory to help Dr. Shirley.

NEW JERSEY CENTER FOR SCIENCE, TECHNOLOGY AND MATHEMATICS

Florencia Nicole Burian, Dominique Doyle, Nyeshia Yarber, Alexander Escobar
Faculty Advisor: Matthew Niepielko

"Conservation and Diversity of Germ Granules in Drosophila"

In many animals, the formation of complex RNPs called germ granules is essential for the post-transcriptional regulation of mRNAs that are required for germline development, maintenance, and function. In Drosophila, the germ granules are assembled at the posterior of the egg and are inherited by the primordial germ cells during embryogenesis. In Drosophila melanogaster, mRNAs accumulate in germ granules by forming homotypic clusters, distinct RNPs containing multiple copies of a specific mRNA type. We found that homotypic clustering is conserved among Drosophila species and that the mRNA content of nos and pgc homotypic clusters, as measured by absolute transcript number, were diverse among Drosophila species.

Josefina Diaz, Eliana Lochak, Kirollos Basta, Hafeez Sheikh
Faculty Advisor: Heather Stokes-Huby

"Synthesis of Novel Azetidines as Potential CCR1 Antagonists"

Chemokine Receptor 1 (CCR1) is a receptor that is expressed on monocytes and T cells, which allows for chemotaxis. CCR1 was studied for its role in Rheumatoid Arthritis but the study was eventually discontinued and new research has begun into potential treatments for glioblastoma. Ideally, a CCR1 antagonist will bind to CCR1 and inhibit function and interaction between CCR1 and MIP1-a (CCR3), RANTES (CCR5) and inhibit chemotaxis caused by those ligands. Use of pyrrolidine core for antagonist compounds has shown efficacy. Our current goal is to synthesize azetidine core with amide or triazole subsititutients and determine potency.

Paula English
Faculty Advisor: Marshall Hayes

"Characterizing Bacteriophages in Pseudomonas aeruginosa"

Bacteriophages are obligate intracellular viruses that infect bacteria and have the potential to induce bacterial replication or lysis. Bacteriophages may display lysogenic or lytic cycles of reproduction, depending on whether they lay dormant within the host cell or degrade the host genome. In this work, phages will be isolated from Pseudomonas aeruginosa ATCC 27853 and further analyzed using plaque picking, serial dilution, and titration. The ultimate goal is to isolate and further characterize the P. aeruginosa bacteriophages. This will be achieved via fluorescent staining and genome sequencing, to confirm whether the phages are lysogenic or lytic.
Research supported by: Institute for Life Science Entrepreneurship (ILSE)

Xyler Ferraris

Faculty Advisor: David Joiner

"Groundwater Flow Through Semi-Permeable Soil Modeled Using the Unity 3D Gaming Engine."

Using the Unity 3D gaming engine, Dr. Joiner and I are modelling the flow of groundwater through soils of different permeability. The practical use of this could be, for example, to study the flow of pollutants through the soil beneath a landfill. This project requires mathematics and physics of steady state flow and uses Laplace's equation on groundwater dynamics to trace the flow of groundwater. The goal of this project is to have a modelling system in 3D rather than 2D and to allow for real data input.

Eloisa Franco, Maria Alejo-Diaz, Sneha Kadam

Faculty Advisor: Dil Ramanathan

"Analysis of Metabolic Pathway in Popular CBD Infused Beverages"

Cannabis sativa has been widely used for centuries due to its medicinal (CBD) and recreational properties (THC). Considering the recent legalization wave of Cannabis products, questions related to such products' safety, potency, and efficiency have arisen. Besides the composition of the products, the storage conditions might also affect the overall performance. This research project aims to analyse CBD oils and CBD infused cold beverages to identify the metabolic pathway of CBD degradation. Samples exposed to different storage conditions were submitted to organic solvent extractions. The analysis was achieved utilizing GC-MS and HPLC-UV instruments, performing rapid, sensitive, and reproductive methods of 33 and 13 minutes respectively.

Marina George

Faculty Advisor: Salvatore Coniglio

"The Effect of Niclosamide on Microglia Immunity"

Microglia is a macrophage produced on the central nervous system and its main role is to use phagocytosis to eat away a pathogen. Cancer cells suppress gene expression on microglia to aid tumor growth and metastasize over the body, therefore allowing the immune system to be the ultimate cure for cancer. Mice glioblastoma cancer cell lines are used to conduct this experiment. Special equipment and formulas will be provided, so this experiment would be possible. The hopes of this research are for nicolsamide, an FDA approved drug, to block the inhibitor (TGFB-1) of the immune system. We expect a reduction and an increase of gene expression for specific genes that aid a tumor grow and metastasize over the body.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Jose Bencosme-Gil, Paulo Vivanco Ojeda, Arnold Rojas, Hayya Ali, Yasmin Darwish, Varsha Medidi

Faculty Advisor: Salvatore Coniglio

"Using qRT-PCR to Measure the Effects of Niclosamide in TGFβ1 Gene Expression"

During the last decades, the effectiveness of cancer treatment has improved considerably. However, the clinical outcome parameters, particularly the metaphysical situation, have only changed moderately. Therefore, the development of new approaches to fight cancer is the main objective of scientists, as well as pharmaceutical companies. Transforming growth factor beta-1 (TGF-b1) is produced by several cell lineages such as lymphocytes, macrophages, and dendritic cells, and its expression serves to control the differentiation, proliferation, and state of activation of these and other cells. In general, TGF-b1 has pleiotropic properties on the immune response during the development of infection diseases and cancer.

Research supported by: U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Xavier Giron-Umanzor, Michael Santino

Faculty Advisor: Edward Farnum

"Dynamic Gain Modeling and Ultra-Short Pulses"

Mode-locked lasers are capable of generating streams of short optical pulses. An alternative to the standard Nonlinear Schrodinger (NLS) model is the Short Pulse Master Mode-locking Equation (SPMMLE). This model better describes pulse propagation for pulses on the picosecond scale and addresses the pulse's phase explicitly. We propose a modification to the SPMMLE, which utilizes a dynamical gain model in which gain saturates according to an ordinary differential equation. In this model, the gain medium will respond temporally. We observed that depending on system parameters, the system gives rise to periodic nearly sinusoidal waves instead of localized pulses. We optimize to determine a fit for these solutions and determine their stability.

Francis Gneco

Faculty Advisor: Brian Baldwin

"Kinesthetic Learning"

STEM jobs are rapidly increasing, yet not enough American undergraduates enroll in STEM. In an effort to increase interest in the STEM field, research was done using VARK to determine the effectiveness of a kinesthetic learning style. STEM students learn kinesthetically when they take part in laboratory research. Introducing a similar experience to other students can encourage enrollment. Research was conducted at Kean University through surveys and interviews to provide some data.

Sarah Goncalves, Arnold Rojas
Faculty Advisor: Salvatore Coniglio

"Regulation of Immune Modulators in 3D Glioblastoma-Microglia Culture"

Glioblastoma is one of the deadliest cancers with a dismal survival rate. Although a great deal of knowledge of the genetic drivers of GBM have been discovered, treatment options have changed very little. Here, we are investigating the possibility of using an FDA approved drug, Niclosamide, as a novel treatment option. Niclosamide has been demonstrated to have anti-tumor activity. Also of interest is our observation that Niclosamide can repolarize the tumor microenvironment and therefore enhance immunotherapy.

Michael Heck, Sarah Bambilla, Angel Quinones, Guilherme Klein Machado
Faculty Advisor: Matthew G. Niepielko

"Gene Expression in Multiple Species of Drosophila"

Animal development requires extensive tissue patterning, or the expression of genes at specific times and locations. An established model system, Drosophila, has enabled scientists to investigate how tissue patterning regulates the development of animal structures. We hypothesize that Drosophila species with different morphologies will have variations in tissue patterning. In our research, we focus on identifying how the evolution of gene patterning leads to different morphologies.

Sneha Rameshrao Kadam
Faculty Advisor: Dil Ramanathan

"Qualitative Analysis of Cannabinoids in Industrial Hemp Using Gas Chromatography-Mass Spectrometry"

This study presents a qualitative analysis of various cannabinoids and other psychoactive components in industrial hemp (non-drug use) using Gas Chromatography-Mass Spectrometry (GC-MS) techniques. The hemp is a strain of Cannabis sativa, which is mainly grown for industrial purposes. It is the main source of CBD-rich oils. The extraction process of CBD oils involves CO2 extraction followed by ethanol distillation for purification. The distillation process tends to lose volatile compounds and other phytocannabinoids. The goal of this study is to determine potential cannabinoids and other active components.

Gregory Marshall
Faculty Advisor: Salvatore Coniglio

"The Role of CCR2 in Glioblastoma Invasion"

Glioblastoma tumor growth and invasion was proven to be affected by microglia/glioblastoma communications through chemokine interactions. Blockade of these pathways has resulted in a change in metastatic ability of the tumor. Chemokine Receptor 1 (CCR1) and its ligand CCL3 are both upregulated at the gene expression level in microglia treated with glioma conditioned media. Compounds made in the Merritt Lab can block CCR1 inhibiting microglia-stimulated invasion in-vitro. Previous research shows the CCL2/CCR2 system feeding into CCL3/CCR1 activity as blockade of CCR2 prevents CCL3 induction. Inhibition of CCR2 in THP1 human macrophages prevents CCL3 induction, further validating this possible CCL2/CCR2/CCL3/CCR1 invasion promoting system.

Briana Martinez
Faculty Advisor: Dil Ramanathan

"Antibacterial Activity of Curcuma longa against Escherichia coli and Staphylococcus aureus"

Curcuma longa, also known as Turmeric, is found mainly in the Indian subcontinent and in Southeast Asia and has strong anti-inflammatory and anti-oxidant properties and can be used to prevent diseases like arthritis, cancer, and Alzheimer's disease. The objective of this study is to determine whether Curcuma longa has antimicrobial properties that can be used to treat current health problems as natural medicine alternatives. Agar well diffusion techniques were used to determine antibacterial activity of turmeric extract using various organic solvents against Escherichia coli and Staphylococcus aureus. The results showed that turmeric extracts in methanol and ethyl acetate showed inhibition against both E. coli and S. aureus.

Michele Menders, Krystiana Ceselka, Robert Alves
Faculty Advisor: Brian Baldwin

"New Standardized Test in Math and Its Predicted Impact on High School Graduation"

Currently in New Jersey, a high school student must pass the Algebra I New Jersey Student Learning Assessment (NJSLA) and the ELA 10th Grade NJSLA in order to graduate. In October 2019, a new exam combining Algebra I and Geometry material was proposed for high school students to take and pass in order to graduate. Students entering high school in 2021 would be the first students to take this exam when they reach 11th grade. We compared Algebra I and Geometry scores for the 2016, 2017, 2018, and 2019 academic years of each District Factor Group (DFG) in New Jersey to make a prediction about the new passing rate. We found that high school graduation rates can and will drop significantly if schools do not properly prepare themselves.

Minas Mikros, Alex Escobar, Florencia Burian, Priscilla Chinchilla, William Lamberg, Hafeez Sheikh, Maria Alejo

Faculty Advisors: James Merritt, Heather Stokes-Huby

"Synthesis of Novel Piperidines as Potential CCR1 Antagonists"

Chemokine Receptor 1 (CCR1) is a receptor on monocyte surfaces. Introducing an inhibitor (antagonist) to CCR1 could block the spread of glioblastoma (cancer that begins in the brain). CCR1 antagonists can bind to CCR1 and block its function. Antagonists inhibit interaction between CCR1 and MIP1-a, RANTES, and other WBCs.There exists a high concentration of MIP1-a, and RANTES in glioblastoma. We synthesized new CCR1 antagonists by combining piperidine cores with different carboxylic acids and isocyanates to make amides and ureas. Our initial goal was to chemically synthesize these molecules and determine the structure and purity by NMR and HPLC. Our ultimate goal is to determine if the change from pyrrolidine (known antagonists for CCR1) to piperidine is tolerated by testing the compounds in a cellular assay.

Katharine Morrison

Faculty Advisor: Matthew Niepielko

"Investigating Microbiomes and Alcohol Tolerance in Drosophila Species"

Environmental differences among various species of Drosophila, cause alcohol tolerance variance across Drosophila species. This is regulated by the organism's genetics, particularly ADH enzyme activity, and other phenotypic factors like body mass. There's growing evidence that microbiomes can influence an organism's ability to tolerate alcohol independent to its genome. Through finding alcohol tolerance thresholds for four Drosophila species: melanogaster, virilis, willistoni, and guttifera and monitoring their changes after ingesting bacteria that metabolize alcohol with high efficiency, microbiome mechanisms regulating drug toxicity may be revealed. Our findings may have broader implications in fields like addiction and drug sensitivity.

Katiely Munoz

Faculty Advisors: Louis Beaugris, Ryan Cho

"Evaluating the Impact of Timing ART on Tuberculosis Risk HIV Patients"

The World Health Organization lowered the treatment level of individuals with HIV in 2010. The cutoff was once again lowered in 2013. The organization conducted tests on the timing of antiretroviral therapy on the people of Haiti with HIV to create these cutoffs. Previous studies have used various regression models to analyze the relationship between early and delayed antiretroviral treatment groups and found that delayed treatment increased the odds of a subject contracting tuberculosis (Collins et al., 2014). The purpose of this study was to provide further statistical analysis of the relationship between treatment times and incidence of tuberculosis. The target population focused on individuals in Haiti with HIV that received treatment.

Research supported by: National Heart, Lung, and Blood Institute (NHLBI)

Ifunanya Okoro

Faculty Advisor: Marshall Hayes

"Bacillus amyloliquefaciens PB6 Transformation and Fengycin Mutagenesis"

Strains of the Bacillus genus are used as probiotics to provide immunity against gastrointestinal pathogens and to maintain a healthy host microbiome. B. subtilis inhibits the growth of many zoonotic foodborne pathogens through its production of the lipopeptide, fengycin. This study focuses on B. amyloliquefaciens PB6, a strain within the B. subtilis species complex, to determine whether fengycin contributes to antibacterial properties against pathogens, such as Clostridium perfringens and Staphylococcus aureus. Many pathogenic bacterial strains have evolved into "superbugs" that are resistant to many antibiotics. Further understanding of the function of secondary metabolites such as fengycin may yield novel solutions to the problem of antimicrobial resistance.

Research supported by: The New Jersey Center for Science, Technology and Mathematics (NJCSTM) and the Institute for Life Science Entrepreneurship (ILSE)

Mark Otoigiakhi

Faculty Advisor: Marshall Hayes

"Nature and Its Correlation with Mathematical Patterns"

This research examines how mathematical patterns are inherently correlated with nature. Most animals do not seem to use pattern and periodicity to their advantage, but others tend to apply them for survival and reproduction. Scientists investigate these phenomena to determine why mathematical patterns are so closely associated with the activities of organisms, and whether they are ultimately beneficial to society.

Dhara A. Patel

Faculty Advisor: Dil Ramanathan

"Profiling of Piper methysticum Root Powder and Extract Using Gas Chromatography-Mass Spectrometry"

Kava Kava (Piper mythesticum) is used in the South Pacific Islands for ceremonial purposes or recreational use. Kava Kava products are also famous for their antidepressant, anti-oxidative, anti-fungal, and anti-inflammatory actions. Thus, the goal of this project is to identify kavalactones (KLs) and other therapeutic compounds present in both root powder and Kava Kava extract that may be contributing to these properties. Identified compounds are Dihydroxyacetone, α-Caryophyllene, and Kavain. This study plans on further optimizing the extraction protocol for identifying and profiling the maximum number of compounds, especially focusing on the detection of kavalactones and medicinally important molecules present in these Kava Kava products.

Katie Pileggi

Faculty Advisor: Brian Baldwin

"Integrating Microbiology into Next Generation Science Standards with STEM Teaching Tools"

The project detailed includes the range of microbiology tools and content untaught in most teaching curriculum. Next Generation Science Standards describes new standards that incorporate 3D science learning including science and engineering practices, disciplinary core ideas, and crosscutting concepts. These feature practical tools for science educators to help students implement materials and content that will be useful in current and future education. It is important to get students involved with education in a hands-on matter to investigate and experiment findings for solutions to educational questions. This new take on education will allow students to apply the concepts learned to other challenges inside and outside the classroom.

Alyssa Ramirez, Antoinette Antonucci, Rafael Carulla-Aparicio

Faculty Advisor: James Merritt

"Synthesis of TarO Inhibitors, Combined with β-lactam Antibiotics for Treatment of MRSA"

Antibiotic resistance is a growing problem within the healthcare field due to the increase in drug-resistant pathogens. Methicillin-resistant Staphylococcus aureus (MRSA) is one of the leading causes of death in antibiotic-resistance infections. β-lactams have become increasingly ineffective against the prevention and treatment of MRSA. TarO is an enzyme involved in teichoic acid (WTA) synthesis in the cell wall of gram-positive bacteria. By using TarO inhibitors, with previously effective antibiotics it can become potent against MRSA by altering WTA synthesis. We synthesized, purified, and characterized a series of TarO inhibitors and tested their effectiveness in combination with β-lactam antibiotics in in vitro synergy studies.

Emily Rivera

Faculty Advisor: Edward Farnum

"Dynamic Gain Analysis on Mode-Locked Lasers"

Periodic trains of localized pulses can be generated by mode-locked lasers. In laser models, the gain saturates due to the finite number of atoms in the gain medium. Previously observed was the standard model, Haus' Master Mode-Locking Equation (MML), which attempts to depict the realism of a laser in fiber optic cable. The gain model suggested in the MML displays instantaneous saturation. This gain model avoided tedious and complex mathematics, however we recently proposed a time-dependent gain. Although the extent of stability for which this new gain model holds is not yet clearly defined, a small region producing a solitary wave solution has been found. Further research will seek to clarify more about the stability of this new model.

Facundo Valentino Torres

Faculty Advisor: Marshall Hayes

"Establishing a Reproducible Transformation Protocol for Bacillus amyloliquefaciens PB6"

This research focuses on the transformation of Bacillus amyloliquefaciens PB6, with the ultimate goal of generating mutants impaired in their abilities to synthesize secondary metabolites. Transformation experiments began in the fall of 2019, and published experimental protocols have been modified to account for bacterial growth phase, growth medium, electroporation buffers, electrical field, and plasmid quantity. Establishing a library of validated PB6 mutants will be valuable to Kemin Industries, the patent holders for the industrial use of PB6. Kemin will be able to engineer PB6 to suit their biotechnological needs in the context of Clostat, a probiotic food supplement created to improve the intestinal health of livestock.

Research supported by: Institute for Life Science Entrepreneurship (ILSE)

Christopher Varsanyi

Faculty Advisor: Salvatore Coniglio

"Osteopontin is Induced in Tumor Associated Macrophages"

Glioblastoma (GBM) is the most severe form of brain cancer to treat, with a low survival rate and limited treatment options. The metastasis of GBM involves the recruitment of microglia into the tumor environment (TME). Chemokine, colony stimulate factor 1 (CFS-1), is released by GBM that recruits microglia by binding to its colony stimulating factor 1 receptor (CSF-1R), which allows for the protection of tumors from anti-tumor immune cells. Microglia release a matricelluar protein, called ostepontin (OPN), which have been shown to stimulate glioma to release more CSF-1 and to aid in the processes of reshaping the TME for metastasis. When CSF-1 is blocked, the recruitment of microglia is reduced and secretion of OPN is decreased, further preventing metastasis .

Bianca Ulrich

Faculty Advisor: Marshall Hayes

"Genomic and Quorum Sensing Variability in Pigmented Serratia marcescens Strains"

Prodigiosin is an antimicrobial pigment produced by bacteria, such as Serratia marcescens. Pigment production has been observed to differ between S. marcescens strains ATCC 13880 and ATCC 43862. The 14-gene cluster pigA-N is responsible for prodigiosin biosynthesis. This gene cluster will be amplified from ATCC 43862, sequenced and compared to the reference genome of ATCC 13880 to detect possible variability that may explain phenotypic differences. Prodigiosin production in S. marcescens is also influenced by N-Acyl Homoserine Lactone (AHL)-mediated quorum sensing, a mechanism found in numerous Gram-negative bacteria. The AHL-like quorum-sensing gene cluster SmaI/SmaR will also be amplified, sequenced, and compared between strains.

Research supported by: Institute for Life Science Entrepreneurship (ILSE)

Michael Valentino

Faculty Advisor: David Joiner

"Metaheuristics"

How do different metaheuristic algorithms perform minimizing various functions? The creation of these algorithms is an important ongoing step in improving the time and efficiency of optimization. Well-known optimizable functions were used to test the algorithms created against established metaheuristics. Inspiration for these algorithms were taken by mainly studying Computational Swarm Intelligence and Evolutionary Computation. Balancing the exploration and exploitation of the function domain greatly reflects the outcome of these algorithms. Finding new and novel ways to achieve this balance will further the field of optimization.

Mikhail Zagurskiy, Kanza Mian, Patrick Gabriel, Brandon Tabori, Brianna Van Ness, Francesca Tomesco, Ryan Morrison, Madeline Spinelli

Faculty Advisor: Salvatore Coniglio

"Measuring Efficacy of CCR1 Antagonism"

C-C Chemokine receptor 1 (CCR1) is a G-protein coupled cell surface receptor involved in the chemotaxis of leukocytes via ligand receptor binding. Our prior research has shown that CCR1 is expressed in the invasion of glioblastoma, a highly aggressive terminal carcinoma. These compounds were synthesized by coupling various synthons to a pyrrolidine core. The compounds were tested in a CCR1 binding assay at three concentrations versus the natural ligand (CCL3). Thus far, changes that improved predicted brain penetration resulted in loss of potency for receptor binding. We used several methods to screen for CCR1 antagonism including chemotaxis assays and biochemical measurement of phosphor-Myosin Light Chain using standard western/"dot" blot.

STUDENT ORAL PRESENTATION ABSTRACTS

COLLEGE OF BUSINESS AND PUBLIC MANAGEMENT

ACCOUNTING AND FINANCE

Kenneth Mayorga, Jeffrey Peck, Angel Mayora, Diana Mendes, Andres Rameriz, Astride Noel

Faculty Advisor: Tin Shan Suen

"Compare and Contrast FED Policy in Different Crisis"

This research day project compares and contrasts FED policy during the dotcom bubble and 2008 financial crisis. Our methodology is to review public records, literature, FED publications, etc. We expect that the FED policy is very different in these two crises. There were a lot of extraordinary mergers during the financial crisis. This project can help us better understand how the FED handles economic crisis.

Mingming Wang, Peng Chen, Renda Chen

Faculty Advisor: Qian Mao

"Chinese Real Estate Investment in U.S."

In the recent decade, China's total investment in real estate in the United States, including both residential housing and commercial housing, has risen significantly, which has had a huge impact on foreign direct investment in the United States. In this research, we first examine the data on the economic conditions of both China and the U.S., the preferences of Chinese buyers and the characteristics of the deals, etc. Then, we explain the driving forces behind the phenomenon. Finally, we provide the conclusions and predictions for the future.

CRIMINAL JUSTICE AND PUBLIC ADMINISTRATION

Amanda Galazzo, Deborah Rivera, Iesha Torres

Faculty Advisor: Jung Ah (Claire) Yun, Bok Gyo Jeong

"Learning by Giving Project: Sharing Students' Experience"

This study, based on the Learning by Giving Project and sponsored by the Kean Foundation Faculty Research Awards, examines whether and to what extent experiential philanthropic courses benefit students' learning. This study offers hands-on experience for students in organizational assessment and philanthropic giving through four public administration courses, both graduate and undergraduate, at Kean University. Pre-course and post-course surveys were conducted to measure students' thoughts on giving and volunteering. This research project will provide pedagogical implications for instructors, as well as practical hands-on experience for students related to philanthropic learning.

Research supported by: Foundation Faculty Research Award, Kean University Foundation

Brandon Vilela

Faculty Advisor: Patrick McManimon

"Perspective on the Change of Immigration Law"

The history of the United States is based largely on immigration. The United States for many was thought to be the place where people go to pursue the "American Dream." For others, they see the United States as a place where they can escape the unfair persecution from their home country, since the United States is known as the land of the free. Each generation has had their fair share of controversy with immigration, which is often tied to things that are current to the news. It is important to learn how we have gotten to our current state of immigration and what brought us to the stance the United States is currently taking.

GLOBAL BUSINESS, MANAGEMENT AND MARKETING

Lauren Adams, Yemil Ortiz, Yogesh Patel, Alessio Giannobile, Maria Caridad Perez Casado

Faculty Advisor: Kihwan Kim

"Mark Zuckerberg"

Mark Zuckerberg is one of the founding members and current CEO of Facebook Inc., which owns Instagram, WhatsApp, and Oculus. Zuckerberg studied psychology and computer science at Harvard University where he helped develop and create Facebook. We will highlight the elements that make our leader an extraordinary and successful person, and who was able to change the way of communication worldwide through his leadership. We will also discuss his positive traits, such as his emotionality, modesty, and intelligence. Also, we will discuss his dark traits such as immoderation and melancholy. We will provide information on how well he is running his company. We will conclude with any ideas or recommendations we have to improve his company.

Bukola Anibaba, Minerva Rodriguez, Evan Bombeke, Neha Shaw, Janice Melendez

Faculty Advisor: Kihwan Kim

"Analysis of Henry Ford's Leadership Style"

Leadership is one of the contentious issues in organizational and business management studies and practices. Some business leaders that leave a profound impact in this world; it could be due to their success or failures that they rose to success. To understand the roles and importance of leadership in an organization, this research seeks to analyze the leadership style used by Henry Ford (1863-1947), the founder of Ford Motor Company, who engineered the assembly line technique of mass production, in the management of his company. Although the rationale is to explain and justify if he had fit or misfit in running his company, the leadership style will be viewed from Trait, Behavior and Situations Approach.

Umaima Anwar, Leiming Tu, Enshrah Virk, Jorge Morales
Faculty Advisor: Min-Chung Han

"Pacific Coffee Company: Marketing Campaign"

Pacific Coffee, a Hong Kong based coffee shop chain with a Pacific Northwestern U.S style, aims to go international and expand their brand beyond East-Asian markets. Despite its growing prospects towards an American market, P.C.C would encounter numerous obstacles. This research seeks to conduct a P.E.S.T analysis to measure the brands ability to create a successful presence in Union Township of New Jersey among the powerful coffee shop chains currently dominating the region. This analysis will aid in the creation of an integrated omni-channel marketing campaign consisting of a website, retail location, paid media marketing strategies, and the establishment of a strong social media presence.

Sharise Baker-Bazile, Mayara Oliveira, Mia Hernandez, Marco Miranda, Chris White
Faculty Advisor: Kihwan Kim

"Bill Gates: Leadership Skills that Led Him to the Top"

Our group will focus on analyzing how Bill Gates became such a prominent business leader today. Using the behavior approach, trait approach, and situational analysis, we will go into detail on Gates' style of being a leader. As a group, the topics we aim to cover include his personality, skills, knowledge, expertise, any dark traits, and what his leadership style. Our project will allow us to decide on whether Gates is fit or misfit to run a company and make recommendations that we feel could help him improve his leadership skills.

Jhaicob Estil-Sauveur, Janvi Patel, Arta Bastriaga, Jessica Soo Jin Wen, Elizabeth Cudworth
Faculty Advisor: Kihwan Kim

"Analysis of Warren Buffett's Leadership Style"

Warren Edward Buffett is an American business magnate, investor, and philanthropist, who is the chairperson and CEO of Berkshire Hathaway. He has a net worth of US$88.9 billion. Buffett had a vision to create a successful business and was able to turn that vision into reality. By inspiring his employees to see the same vision, Buffett has been able to grow his business and make it flourish. Our project aims to explain how he could be a successful leader by analyzing his leadership behaviors in terms of trait approach, behavioral approach, and situational approach. We will discuss his traits such as intelligence, emotion, dark traits, and behaviors. Finally, we will provide recommendations on how he can improve his leadership skills.

Mark Fernicola, Justin Regester, Daniel Chiusano
Faculty Advisor: Min-Chung Han

"A Market Analyst to Help Rebrand Red Rooster to Focus on More Than Just Poultry"

Red Rooster is an Austrian fast food restaurant chain, which started in 1972, that specializes in roast chicken. They did an intensive image upgrade in 2014 introducing its new brand, "tender loving chicken." However, it is not working. In 2019, seven Red Rooster stores closed. The problem and concerns are about Red Rooster's franchise model. They focus too much on chicken and do not respond to new consumer trends. The research will make a quantitative and qualitative assessment of the market. We will analyze the various customer segments, by buying patterns, the competition and economic environment in terms of barriers. In conclusion, our outcomes are to re-brand Red Rooster to address the changing market trend and new young million customers.

Adedolapo Gbadebo, Amani Griffith, Joaxel Duran, Eric Pio, Chenying Li
Faculty Advisor: Min-Chung Han

"Piercing the Traditional Coffeehouse Industry"

Pacific Coffee is a coffee shop originating from Hong Kong and owned by Chevalier Pacific. Hong Kong alone has 120 branches. The coffee shop has since expanded to other Asian countries, including South Korea and Malaysia. Their promise to create a peaceful environment in an urban lifestyle is very promising for a country, such as the United States. Industrialization of "trending cafe culture" in the United States, has elevated standards of menu items and environmental aesthetics to a new and radically competitive domain. With a western-style coffee shop culture, can Pacific Coffee be a success in the United States? In this research, we will seek to answer those questions.

Brian Lima, Edwin Duwor, Wali Pirece-Kemp
Faculty Advisor: Min-Chung Han

"A Market Inquiry of MOS Burger and the Possibility of Operating in the U.S."

MOS Burger is a Japanese hamburger chain, which has presented hamburgers specifically made to the Japanese taste since 1972. MOS Burgers is in a few countries outside of Japan, such as Indonesia, Australia, South Korea, Taiwan, and Singapore. However, can this burger chain sustain in the United States? This research precisely answers the question of whether MOS Burger has the capability to persist in the competitive market of the U.S. MOS Burgers are the 2nd largest burger fast food chain in Japan and other parts of Eastern Asia behind McDonalds. Knowing the American fast food market, successful chains offer beef burgers, french fries, chicken, and drinks. MOS currently has all those in their menu which suits the American consumer.

Samantha Martone, Marco Lagera, Leonel Freeman, Danwei Yang, Ashley Tufuga
Faculty Advisor: Min-Chung Han

"Eating Straight from the Pan? A Market Analysis of Singapore's Fish & Co."

Fish & Co. is a successful family restaurant chain from Singapore, which serves fresh seafood in a pan; however, there is no Fish & Co. restaurant in the United States under the global marketing trend. This research aims to analyze market conditions and prepare for establishing the Fish & Co business in New Jersey. Research will apply PEST and SWOT analysis and conduct a survey to determine potential customers' price acceptance range, location choice, promotion channels, and product adjustment. An omni-channel marketing campaign will be devised to entice the shareholders of Fish & Co. to invest in our community. Our marketing campaign will feature electronic and technological marketing techniques that will be based on our findings.

Elaine Matias, Amanda Williams, Chantise Spikes, Leslie Canales, Xavier Maldonado
Faculty Advisor: Min-Chung Han

"MOS Burgers from Japan to the World"

Mos Burgers is a famous restaurant in Japan with promises of making their customers happy through food, but in a healthier way. With hopes of expanding outside of Japan and introducing their food to a broader audience, will MOS Burgers be able to appeal to unfamiliar consumers outside of Japan? With our research, we can determine if a special place such as MOS Burgers can be as successful overseas in other countries, such as America, by looking at the business aspects, including the safety and healthiness of their food, their business ethics, and service quality.

Janna Sabbahi, Kyara Coronado, Chengchao Zhang, Kyheonna Hinds
Faculty Advisor: Kihwan Kim

"Leadership Analysis of Jack Ma: Trait, Behavioral and Situational Approach"

Jack Ma is one of the founders and the former executive chairperson of Alibaba Group. He is a successful business leader and Chinese business magnate, investor, politician, and philanthropist. Ma is a strong believer of an open and market-driven society. We will examine his influential leadership styles and highlight his inspiring business behaviors along with understanding the trait approach, behavioral approach, and situational approach. We will also be focusing on his intelligence, but not his emotions since it is not a valued trait. Analyzing the merits and shortcomings of Jack Ma, we will highlight his good leadership qualities and business management skills. Our paper will develop conversation on what makes a leader a good leader.

Jake Santos, Samantha Estenes, Breanna Hernandez, Adelcia Sejour, Lindsey Gonzales
Faculty Advisor: Kihwan Kim

"Steve Jobs"

Steven Paul Jobs was a co-founder of Apple computers. He was a college dropout who became a successful American inventor, designer, and entrepreneur. Unfortunately, he died in 2011 and was only worth 7 billion dollars at that time. He is now worth about 23 billion dollars. The purpose of this paper is to explain how Steve Jobs could have been a better leader then he was by analyzing his traits in all aspects as in behavior, and situations dealt with. Our analysis will point out the pros and cons of the famous Steve Jobs. We will discuss his personal traits, such as intelligence, emotion, dark traits, and behaviors, such as a task or relationship-oriented leadership behaviors.

Maria Solano de la Sala Torres, Gaia Cioli, Jiayi Zhou, Angel Palacio
Faculty Advisor: Min-Chung Han

"BreadTalk Transformation"

BreadTalk, is a Singaporean multinational food and beverage corporation and one of several leading companies in Asia. Our research hypothesis is that BreadTalk can enter and survive in the American market. Our team will analyze the political/legal, economic, socio-cultural, and technological aspects of the American market, along with its consumer behavior of both the country itself and current consumers of BreadTalk products. An omni-channel marketing campaign will be designed for the executive decision-makers of BreadTalk to implement in venturing into the United States. The analysis will derive from secondary sources and the findings will include electronic and technological marketing efforts, advertisements, and brick-and-mortar opportunities.

Kexin Tang, Fangke Wan, Qi Wang
Faculty Advisor: Qian Mao

"Chinese ADRs in the Middle of Trade War"

In this study, we propose a new rationale for Chinese firms' delisting decision: tremendous delist then reissue shares and relist back in Chinese market, because of the outbreak of the trade war. Based on the empirical research, we first reviewed the potential relationship between stock returns of Chinese ADRs and S&P Index, as well as it with the Shanghai Composite Index. More importantly, we provide evidence supporting our new rationale: the outbreak of trade war, which took an essential role in the recent wave of Chinese ADRs going to delist. Overall, our study found out that the trade war has a detrimental effect on Chinese ADRs that trade on NYSE and NASDAQ.

Victoria Vitale, Dylan Saborio, Anthony Samsel, Christine Vaneus, Zhihong Chen
Faculty Advisor: Kihwan Kim

"The Mind of Jeff Bezos"

Our group's presentation has the intention of explaining Bezos' leadership strategies and why they make him so successful. The trait approach, behavioral approach, and situational approach will all be incorporated, as there is not one best style of leadership. The best leaders can integrate all styles to ensure the most success within their organization. His leadership characteristics, such as communication, goals, knowledge, commitment, and even his dark traits will be discussed, as well as his behavioral approaches, which include both task-oriented and relationship-oriented styles. After performing adequate research on Bezos, our group will conclude whether his styles suit the company or not.

Danwei Yang
Faculty Advisor: Min-Chung Han

"University Students' Acceptance of Using Instant Messenger Chatbots"

This study aims to understand students' acceptance of the chatbot to learn personal finance, and their intention to use the financial institutions. It also provides suggestions for developing effective chatbots to attract students. Based on the Technology Acceptance Model (TAM), this research recruited thirty-one Kean University students as survey respondents. Results showed that the easier students felt using the chatbot was, the more positive attitudes toward chatbot they had; however, their attitudes were not affected by perceived usefulness. Unlike what we expected, the cheerful outlook towards chatbot did not influence intention to use financial institutions.
Research supported by: Research Recruits program, Kean University

Yating Zhong, Zedan Han, Ameenah Danmole, Jessie Coronel, Julian Mullen
Faculty Advisors: Kihwan Kim, Byeonghwa Park

"Survey Measuring Current Member's Experience and Potential Expectation of Greater Elizabeth Chamber"

The Chamber of Commerce of Elizabeth is seeking to develop a greater understanding of their current priority, current members. This study's purpose is to identify and understand the needs and perspectives of the members of The Greater Elizabeth Chamber of Commerce. The conducted survey included 3 distinct categories and 43 questions. The data that was collected was then analyzed to form an understanding of the existing members' experiences. Our marketing research surrounding current members is meant to interpret this information or feedback to construct a conclusion. An establishment, such as The Elizabeth Chamber of Commerce stands as an example of how to assist business owners to expand, network, and become the best versions of themselves.

COLLEGE OF EDUCATION

CURRICULUM AND TEACHING

Crystal Kacerek, Miguel Ruiz
Faculty Advisor: Jennifer Chen

"An Intervention Study of Letter Recognition Among Preschool Children"

This intervention study investigated the efficacy of The Kangaroo Crew reading app in improving preschool children's letter recognition. Eighteen preschool children from low-income backgrounds participated; they were randomly divided into one of two groups (control group and intervention group). All children participated in a pre-test and a post-test to assess the number of randomized upper case letters that they could recognize on an iPad screen. Intervention was implemented by providing The Kangaroo Crew letter recognition app on a tablet. Data analysis included comparing the children's pre-test and post-test performances on letter recognition. We will discuss the research results and their implications for teaching and student learning of upper case letters.
Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

HEALTH AND HUMAN PERFORMANCE

Jennifer Fernandez, Alyssa Antoine
Faculty Advisors: Omara Cardoza, Consuelo Bonillas

"Year One Results of Implementing Teen Pregnancy Prevention Programs in New Jersey Schools"

This research study evaluated the effectiveness of two programs that the New Jersey Department of Health funds for the school year of 2018-2019. The two programs that are funded are New Jersey Personal Responsibility Education Program (NJPREP) and Sexual Risk Avoidance Education Program (SRAE). Both are evidence-based and are designed to decrease adolescent pregnancy and sexually transmitted infections in New Jersey's State identified high-risk municipalities.This study was conducted in a total of 5 sites. A cohort of 127 7th-10th grade students participated in the programs.
Research supported by: New Jersey Department of Health - NJPREP/SRAE

COLLEGE OF LIBERAL ARTS

ART HISTORY

Jodie Battaglia
Faculty Advisor: Jacquelyn T. Stonberg

"Website Creation for a Catalog of Medieval Magical Amulets"

This online catalog will be in the form of a website for public distribution. The content will include original drawings after actual medieval amulets, identification of their iconography, and discussion of their magical function.

Anthony B. Couto, Kayla E. Darcy, Angely Diaz, Maria Didario, Eduardo J. Granados, Marielena Guthrie, Valeria Hirsch, Cheryl Jordan, Cheyanne L. Kerchner, Robert Looby, Brandon E. Mahipat, Michael S. Malloy, Erin B. McGuinness, Eric C. Miele, De'von M. Mitchell, Daniela Mosquera, Daiana Ortiz, Peterjon R. Peralta, Tiel Roman Lafargue, Shanake N. Samaranayake, Evan M. Segars, Rachel M. Segars, Komal Shezadi, Edward F. Tengwall, Karen J. Wright-Borkowski
Faculty Advisor: Jacquelyn T. Stonberg

"Byzantine Woman and Material Culture: Art History Research Papers"

This student research will be published in the upcoming art exhibition catalog for "Greek Women: Then and Now," opening in Athens, Greece July 15-30 and Kean University Nov 10, curated by Dr. Jacquelyn Tuerk-Stonberg. Byzantium was the Christian Greek-speaking Roman Empire into the Middle Ages. Papers address aspects of female identity in Byzantine art and material culture.

Anibal Aguilera, Jodie Battaglia, Linda Davis, Angely Diaz, Kathryn Doyle, Matthew Fernandez, Julie Gallagher, Marielena Guthrie, Lindsay Kaiser, Mary Clare King, Oriana Laboy, Brandon Mahipat, Jessica Marini, Eric Miele, De'von Mitchell, Daiana Ortiz, Taylor Pasqualini, Morgan Petzold, Timothy Rivera, Maria Rodriguez, Angela Rutigliano, Carlos Tobon, Karen Wright-Borkowski
Faculty Advisor: Jacquelyn T. Stonberg

"Curating and International Art Exhibition in Athens Greece"

Students in AH 3770 are co-curating an international art exhibition, "Greek Women: Then and Now," that will open in Athens, Greece in Summer 2020 and on Kean campus Fall 2020. Students will show how they wrote scholarly essays for publication in the exhibition catalog and created poster displays of their researched information for display in the exhibition

Christopher Thoms-Bauer
Faculty Advisor: Jacquelyn Tuerk-Stonberg

"Cleopatra VII: Greek, Egyptian, and Roman Goddess"

Ancient Greeks did not believe humans could exist as members of the divine, but that belief did not stop particular rulers of the Hellenistic period. Cleopatra VII went against these traditional Greek norms – she was fashioned as a goddess and worshipped throughout the ancient Mediterranean as such. By analyzing visual evidence for the divinization of Cleopatra, we can better understand the construction of power in terms of ruler-deification in Hellenistic Greece. Evidence from Greek, Egyptian, and Roman coins, stelae, statues, paintings, and texts presents Cleopatra as a universal goddess. These portrayals of her survived centuries after her death, and worshippers continued to implement her image in religious practice long after her suicide.

COMMUNICATION MEDIA AND JOURNALISM

Craig Epstein, Erin McGuinness
Faculty Advisor: Patricia Winters-Lauro

"Why Student Journalism Matters"

In an age of fake news and mega-spin, it is more important than ever to educate the college community about the necessity of solid journalism to understand today's world. One way to get students interested in the world is to explain to them the place that they already inhabit – the college community – in a fair, interesting, and honest way that reflects the best standards in the journalism discipline. Here, the editor-in-chief and the staff of "The Tower," Kean University's award-winning independent student newspaper, will show examples of their work, explain their process and tell the stories behind it all as they strive to make "The Tower" a voice of community, civility, and independent journalism.

Justin Torres
Faculty Advisor: Julian Costa

"A Historical Overview of Communication Education at Kean University"

The School of Communication, Media, and Journalism at Kean University has a strong presence on campus, being the second largest department in the College of Liberal Arts, as well as a critical component of the General Education curriculum. What remains unclear to many people is how communication reached such a prominent standing. Beginning as an aspect of student teacher training, and eventually growing into its own school, this study sheds light on the development of communication programs at Kean. Through primary research and extensive archival investigation, the pioneers and the torchbearers are brought back to life, and the story of how a dynamic discipline flourished at Kean is told for the first time.

ENGLISH STUDIES

Christina Masucci
Faculty Advisor: Mia Zamora

"Dichotomy of Fan: A Snapshot of Interaction, Participation and Belonging in Modern Fandom Culture"

Everyone is a fan of something. Everyone has their Thing—music, shows, books—that influences them, drives them, or simply puts a smile on their face throughout the day. This thesis project started as a result of fan experience—a creative piece after years of influence, interaction, and participation—but soon moved to an exploration of fandom itself. It has become a snapshot of fan communities today as both my peers—through interviews—and I—through autoethnographic accounts—have experienced them, analyzed through the theoretical discussions of researchers, like Henry Jenkins, and compiled in a series of vignettes (read: rants) on fandom trends, ethics, memes, and lingo.

Tunhi (Linda) Pham, Patricia Dennis, Nives Migliaccio, Alexis Hordge, Susan Wong, Meagan T Mentor, Emily Morris, Medea Chillemi, Dylan Hirtler
Faculty Advisor: Mia Zamora

"Empowering Expression: Nurturing Voice in Emerging Writers"

Theorists Peter Elbow, Lisa Delpit, and Paolo Freire explore power dynamics in writing theory, revealing that the white, male voice is the dominant, authoritative voice in the traditional English curriculum. As a response to a dearth of diverse perspectives, we (a cohort of graduate English students from diverse backgrounds) decided to reclaim our voices by sharing our collective stories. We designed this open, participatory project with the pedagogical values of equity and inclusion as our primary learning goal. With the guidance of Dr. Mia Zamora, we successfully published our stories, poems, and podcasts on our website. By reclaiming our voice, we hope to inspire others to find, articulate, and celebrate their uniqueness.

Bingaman Wu, Chenghang Wu
Faculty Advisor: Mark Smith

"Light in the Darkness: A Dialogic Analysis of Joseph Conrad's Heart of Darkness"

Joseph Conrad's Heart of Darkness is regarded as one of the greatest novellas, which reveal the darkness of humanity in colonial activities. In this novella, the character, Kurtz, has experiences that shed light on the nature of colonialism. His last words are "The horror! The horror!" which are explained as the "heart of darkness" by most scholars. However, if we look at the novella from a dialogic perspective across space and time, the novella can open a "gate of light" into the dark period of colonialism. This study will explore the "light" in Kurtz's last words from the dialogical aspect and the theory of chronotope by Bakhtin. The brand-new perspective of analyzing this novella helps us understand deeper about colonial history and human nature.

HISTORY

Victor Alexander Bretones
Faculty Advisor: Elizabeth Hyde

"William Livingston, The Privy Council, The Council of War and Safety and The Logistics of War"

William Livingston, New Jersey's first elected governor, led the state of New Jersey through turbulent times during the American Revolution. As governor, Livingston was leader of the Privy Council, a statewide advisory board. The council controlled and provisioned the New Jersey Militia in collaboration with the Council of Safety. An examination of his papers and public decrees will show how Livingston, through scrupulous work, through careful administration, and working with leaders at the time, like George Washington and others, was able to provide for the New Jersey Militia and was able to guide New Jersey through the Revolution.

Research supported by: National Endowment for the Humanities, MakeHISTORY@Kean: William Livingston's World, AC-258915-18, Research Recruits program, Kean University

Henry T Correa
Faculty Advisor: Xurong Kong

"Chinese Iconography: The Lion and Its Place in Chinese History"

The lion is one of China's icons, but funny enough, the lion is not an animal remotely indigenous to China or the surrounding area, so how did this animal become a symbol in China centuries ago? I would like to look into the possible origins of where the animal's place in Chinese culture originated and how it found its place among the animals Chinese culture holds dear. As a History-Education Major, It's important to ask questions about the things around us and how they ended up where they are; it's part of an educators task to be a well rounded scholar to provide their students with answers for any wide range of curiosity. Primary sources will be the main form of research needed to root out the lion's origin in China.

Kathryn Z Jackson
Faculty Advisor: Rachael B Goldman

"Gender and Sexuality: From Ancient Greece to Ancient Rome"

Gender and sexuality are significant topics against the backdrop of Greco-Roman Ancient History. The Ancients present divergent views of sexuality through lyric and epic poetry, historical prose, decorative arts, and even epigraphic inscriptions. Through this paper, I will discuss the understated and mysterious usages of sexuality in such poets as Hesiod and Sappho. By examining the differences in gender and sexuality, I will use Ovid and Catullus to illustrate how men and women are viewed against the gaze. Mores and values are portrayed differently when it comes to the portrayal of women, especially when all writers are male. I will further balance this discussion with representations of wall paintings that show sexuality in a worldview.

Jeffrey Martin

Faculty Advisor: Elizabeth Hyde

"William Livingston's Military and His Political Views that Influenced Structure in American Government"

William Livingston served as a member of the Continental Congress, from July 1774 to June 1776. In 1775 he was appointed Brigadier General, the highest ranking officer in the New Jersey Militia. Livingston would serve in the Militia until August 1776. In August of 1776 William Livingston became governor of New Jersey. This paper presents William Livingston through his political and military time during the American Revolution. My research will show how Livingston used his popularity to have eyes and ears everywhere when it came to Militia, Continental Army or British Troops.

Giuseppe Sebazttiam

Faculty Advisor: Elizabeth Hyde

"William Livingston: A Renaissance Man and the Emergence of a New Nation"

William Livingston: For some people he was a British subject, of course, a wealthy one, for others he was a Dutch American. It depends on who is writing his biography. Livingston was not an extraordinary man, but he was a politician. He was born on a silver platter, and at a young age, he knew what power was. Livingston came from one of the most wealthy and influential families in the Colonies at the time. Like every politician he was a calculator and also knew how to move his political token. He was very versatile when it came to writing. He used his writings against his competitors and wrote the most polemical pamphlets and newspaper essays. In my paper, I will focus on his early career as a lawyer and a politician.

Nicole Skalenko

Faculty Advisor: Elizabeth Hyde

"Attempts to Capture William Livingston During the American Revolution"

William Livingston was a delegate to the First and Second Continental Congresses, Brigadier General of the New Jersey Militia, and the first elected Governor of New Jersey. In addition, he was also an essayist and political propagandist who helped establish and utilized The New Jersey Gazette as a vehicle to garnish colonial support and satirize the British Monarch. As a result, Livingston found himself at the epicenter of machinations orchestrated by British soldiers resulting in a bounty being placed on his head for his capture, making him one of the most targeted Patriot leaders. This analysis of correspondences and news sources will document the attempts on Livingston's life and recognize his significant service to the colonial cause.

Nicole Skalenko

Faculty Advisor: Jonathan Mercantini

"William Livingston and The Stamp Act of 1765"

The Stamp Act was passed by British Parliament on March 22, 1765. As the first direct tax on the colonies, it resulted in widespread resistance throughout New York, New Jersey, and all of Britain's North American colonies. William Livingston, then an established lawyer, essayist, and political propagandist, led the colony's opposition. Livingston utilized The New-York Gazette as a vehicle to reach a broader audience, to present his arguments against the tax, and to highlight Parliament's subversion to trial by jury, a violation of American liberties. This analysis of Livingston's propaganda in opposition to The Stamp Act will explore his ideology with regards to resisting royal authority, while remaining a loyal subject in the British Empire.

Nicole Skalenko

Faculty Advisor: Frank Argote-Freyre

"Kean Archives Internship Summer 2019"

Throughout the summer of 2019, the Kean Archives moved from its home in the Nancy Thompson Library Learning Commons and the Ice House, located on the Liberty Hall Museum property, to the new Liberty Hall Academic Center Research Library. Interns were hired to assist Head Archivist, Erin Alghandoor, with packing archival material, prepping the Liberty Hall Collection for digitization, and preparing for the new exhibit, "Life, Liberty, and the Pursuit of Happiness." This presentation will highlight the work Kean History interns conducted throughout the summer. In addition to illustrating the highlights of the internship, key figures from our Liberty Hall Collection will also be featured such as Peter Philip James Kean.

Christopher Thoms-Bauer

Faculty Advisor: Rachael Goldman

"Against the Gods: Atheism in Hellenistic Greece"

Atheism in ancient Greece embodied more than total disbelief in divinity. Any action charged with impiety or not favoring the gods fell under the umbrella of ancient Greek atheism. The divinization of Greek rulers influenced Hellenistic Greeks to think that if humans were gods, then gods were humans. Euhemerism, formed at the beginning of the Hellenistic period, expressed that stories of authentic events and humans evolved into mythology. Evaluating Hellenistic sources builds an understanding of atheism's role in the development of religion in the Western world. An examination of the beliefs of the Hellenistic philosophical schools of Cynicism, Skepticism, and Epicureanism produces evidence for the development of atheism in ancient Greece.

Christopher Thoms-Bauer, Kayla M. Doyle, Joseph A. Perry, Elizabeth M. Thorsen, Nicole E. Skalenko

Faculty Advisor: C. Brid Nicholson

"Re-evaluating Thomas Jefferson: The Hemings Family, and Jefferson's Legacy"

The legacy of Thomas Jefferson cannot be seen without taking into consideration his relationship with the Hemings family, and in particular Sally, an enslaved woman with whom he had a 38 year relationship. At the age of 33 Jefferson wrote the words "All Men are created equal" yet during his lifetime he had over 600 enslaved people working at Monticello. This round table discussion will note how history has re-framed Jefferson, and also study how resistant many historians have been to this change. This discussion will look at primary research documents, especially letters by Jefferson, and letters about Jefferson, by John and Abigail Adams in particular.

Christopher Thoms-Bauer

Faculty Advisor: Elizabeth Hyde

"An Examination of the Ancient Pillars of the United States Through William Livingston"

Analyzing the writings and library collection of William Livingston will connect the lessons of Greco-Roman antiquity to the political beliefs of an American Founding Father. Livingston's book list contained dozens of classical authors, and his weekly essays in "The Independent Reflector" provide his opinions on the workings of government and public institutions. Understanding Livingston's beliefs and connecting them to his cited authors of antiquity will provide further information on the influence of ancient history, its ideals, and its politics on the concepts of the American founders. The evidence displays the classically-influenced ideals of the United States in ways that continue to connect the ancient world to the present.

Christopher Thoms-Bauer

Faculty Advisor: Frank Argote-Freyre

"Perceptions of Cleopatra: A Brief Survey from Antiquity to the Present"

Cleopatra VII has existed in many forms throughout the last two millennia, and this project seeks to chronicle the evolving interpretations of her legacy. The ancient authors to the modern biographers depict Cleopatra in ways that dramatically contrast with one another. It is crucial to describe the varying extremes in the narrative of the world's most famous woman to bring awareness to those who may believe there is only one true story. The portrayals of Cleopatra that survive through Augustan poetry and Arab prose can be compared and contrasted to the later historiography found in 20th-century film and modern biographers. Identifying these perceptions allows for the separation of questionable conceptions from the plausible.

HOLOCAUST AND GENOCIDE STUDIES

Isiah Gorie Coleman-Combs

Faculty Advisor: Abigail Perkiss

"The Darkest Ocean: Social Death in the Trans-Atlantic Slave Trade"

This research intends to explore the genocidal properties that ensued during the Trans-Atlantic Slave Trade, also referred to as the 'Triangle Trade.' The argument will propose that slavery as a whole contributed to the social death of African culture in the wake of Afro-American society, while also stating that the Triangle Trade in itself was genocidal. Starting with the beginning of the slave trade and the climax of the trade, in 1650, the enslavement and bestialization of Africans on the slave ships; the subjugation and forced migration of those enslaved; the social death of Africans will provide evidence towards the argument of 'Black Genocide.'

Victoria Nortz, Isiah Coleman-Combs, Andrew Breit

Faculty Advisor: Dennis Klein

"Why Remember Genocide?"

This panel will serve to discuss the relationship of memory to historical acts of genocide. Why do we presume that remembering genocide is important if not essential? Does forgetting or ignoring historical genocide affect future generations? Are historians obligated to keep memory socially relevant? Is memory necessarily accurate? We will address these questions by utilizing three different contexts: the transatlantic slave trade as erasure of memory, the experience of Holocaust memory as a second-generation survivor, and the intersection of memory and history within Nazi Concentration Camp Majdanek in Poland.

Lauren Romano, Alexander Stohler

Faculty Advisor: Dennis Klein

"American Propaganda in Our Time: Disney Cartoons and Hate Rock"

Propaganda is an important tool for governments or groups; it spreads its message and influences people. It can garner support or hate, but one thing is certain; it exists in many forms. It can be seen in music, film, speeches, posters, clothing, and any other form of expression you can think of. Walt Disney and his company even made propaganda for the American government! They made "shorts" for the government during World War II in a partnership that went on to win them awards for the pieces they made for the war. Propaganda has not gone out of style; it is still around today. It can been seen today in every facet of our culture, especially in music. Music can be filled with propaganda; just take a look at some of the rock music produced!

Madelon Rosen-Solomon

Faculty Advisor: Dennis Klein

"The Future of Holocaust Education"

The biggest threats to the historical significance and memory of the Holocaust are not deniers, textbooks, other genocides competing for attention, or even the eventual demise of survivors. Instead, the biggest threat to Holocaust memory is the overwhelming overload of information in today's tech-driven age, especially the overexposure to violence that dwarfs it. It does not help that Jews, the main victims of the Holocaust, constitute a small global population and are often shunned. It is only through education that we can alert people to the dangers of race hatred, and reduce the chances of future genocides. As a teacher and writer of the Holocaust, I am challenged to keep Holocaust memory vivid and to help build a better future.

INTERDISCIPLINARY STUDIES

Kevin Trinidad Murillo

Faculty Advisor: Xurong Kong

"Symbols of China and Heritage"

This research examines cultural symbols that are important to the history of China, despite not having originally been from China. We often have the perception that China has been this long-standing isolationist nation that has only recently opened its borders for international trade. Yet, as history has shown us with symbols such as jade, horses, and lions, they are not traditionally found in the region, but strongly associated with it.

PSYCHOLOGY

Chelsea Appiah Kubi

Faculty Advisor: Richard Conti

"Music Therapy and its effect on Anxiety"

Music has been shown to be an effective and engaging therapeutic intervention in the treatment of anxiety. The present study examined the effect of music therapy on college students during final exam week. Sixty participants were randomly assigned to two groups who were exposed to either classical music or no music while completing an anxiety inventory. Participants in the music condition had significantly lower anxiety scores. No significant gender differences were found.

THE DOROTHY AND GEORGE HENNINGS COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY

NATURAL SCIENCES

Jaime Ferreira, Mrugesh Parekh

Faculty Advisor: Laura Lorentzen, Kristie Reilly

"The Epidemiology of the Modern Ebola Virus Outbreaks"

Ebola Virus Disease is a rare, deadly bloodborne pathogen transmitted to humans from wild animals or through human-to-human contact. Ebola was first discovered in 1976 near the Ebola River, in the Democratic Republic of Congo. There have been outbreaks on different occasions since 2000, such as in 2014 with 28,707 cases and 11,372 deaths across three continents (CDC). According to WHO statistics, the average Ebola case fatality rate is around 50 percent. Our goal is to research factors leading to the massive Ebola outbreak of 2014, and what factors keep scientists from stopping its spread. By researching available statistics and resources, we plan to understand the history and predict the future of Ebola.

Swapna Mannam

Faculty Advisor: Sharmistha Das Iyer

"Ethical Issues in Stem Cell Research"

Stem cells have the ability to become any other type of cell. The most effective type of stem cells are embryonic stem cells. When these cells are extracted from the embryo, the embryo is terminated. Many individuals argue over the ethical standpoint of the embryo; whether or not it should be regarded as a group of cells or a human life. Even so, many scientists wish to further educate themselves and discover new treatment strategies. The study aimed to understand how young adults regard research on stem cells and the ethical issues surrounding it. Kean University students were surveyed and the participants were asked their opinions on human embryonic stem cell research.

Peter Nasr

Faculty Advisor: Laura Lorentzen, Kristie Reilly

"Treating Ebola Virus Disease"

EVD is a rare but deadly virus. The receptors on cells bind to the glycoprotein of the Ebola Virus, which allows the virus to enter the cell. Ebola virus is divided into five different species. Zaire was the first species to appear and is the most dangerous of all five. For every different species there are different vaccinations that control and eliminate the Ebola virus. As research advances, the medical field discovers more substantial treatments with lower mortality rate. Our research goal is to chart the progression and development of former and novel treatments of the Ebola virus.

Shirley Ochoa, Jeremy Bate
Faculty Advisors: Laura Lorentzen, Kristie Reilly

"Our Journey to Getting Published in a Peer-Reviewed Journal"

A team of undergraduate students conducted research of the human immunodeficiency virus (HIV). The students' goal was to map out the virus' epidemiology. The team presented their research for 200 students and educators at Kean University, then continued their work to reformat the oral presentation for Kean Research Days 2019. Afterward, through communication and teamwork, we were able to compose and revise a manuscript to submit for publishing during the summer of 2019. In January 2020, the team learned that the Journal of Student Research accepted their manuscript for publication. From gathering ideas to finalizing the manuscript for publication, we will discuss our team's rewarding journey.

Ernest Ohemeng Afoakwah
Faculty Advisor: Kim Spaccarotella

"Analyzing Flavonoids in Chocolate-based Beverages"

Some amount of previous research has suggested that chocolate-based drinks are very effective post-exercise recovery beverages. The fluid, electrolyte, protein, and carbohydrate content of chocolate milk have been credited with possibly providing this benefit. Antioxidants perhaps contribute to post exercise recovery. Flavonoids, also naturally occurring phytochemicals in cocoa, may be capable of providing antioxidant benefits. Using high-performance liquid chromatography (HPLC) and colorimetry, the present research involved examining the presence of flavonoids (particularly catechin) in seven chocolate-based milk drinks, as they may serve some importance in regard to post-exercise recovery. The findings will help identify whether flavonoids in chocolate-based drinks are present in quantities that could enable them to assist in the recovery process following exercise.

Dhruvi Patel, Eric Delgado
Faculty Advisor: Laura Lorentzen, Kristie Reilly

"Pathology, Symptoms, and Transmission of the Ebola Virus"

Our research goal is to explain the transmission, symptoms, and pathology of EVD, Ebola virus, a virulent pathogen caused by the viral family Filoviridae. These are filamentous viral particles and single stranded negative RNA that cause fatal hemorrhagic fever in both humans and non-humans. WHO and CDC report outbreaks across Africa, Europe, and North America from 1976 to present. Countries with the largest number of cases over the decades are those with some of the highest poverty rates. EVD transmission occurs primarily through contact with infected body fluids that suppresses the immune system and causes organ failure. Our research will showcase the known science underlying the clinical presentation and pathology of infection.

Angela Sista, Nura Sbeah, Matthew Skibniewski
Faculty Advisor: Kristie Reilly

"The Genesis of the Ebola Virus: An Epidemiological Research Study"

The Ebola Virus Disease (EVD) is a rare, deadly disease that is found in nonhuman primates and humans. It is transmitted via direct contact with an infected person that is living/deceased, or by bats or nonhuman primates. EVD was first discovered in 1976 in Zaire, (now the Democratic Republic of Congo), but is believed to be active long before discovery. The virus has been contained largely within this area. The aim of our study is to explore the genesis of EVD through peer-reviewed articles and published data. Our goal is to track the history of this virus and where and how it attacks, as well as to uncover the factors that contributed to the rapid spread of this epidemic.

MICHAEL GRAVES COLLEGE

DESIGN

Dylan Evande
Faculty Advisor: Denise Anderson

"Sent-Off"

Racism has been a stain on the soul of professional men's soccer for generations, and a series of high-profile incidents in 2018-2019 has prompted calls for tougher action. About 74 percent of people surveyed identified fans as the greatest contributing factor of racism due to heckling towards players and throwing debris on the field. This behavior has inspired me to create "Sent-Off," an anti-racism social awareness campaign for professional men's soccer. Its purpose is to educate the fans on how racism is affecting players and to shift the culture of respect in men's soccer.

NATHAN WEISS GRADUATE COLLEGE

COMMUNICATION DISORDERS AND DEAFNESS

Nataly Abraam
Faculty Advisor: Sarah Patten

"Student and Supervisor Perspectives on Work-Integrated Learning in Clinical Graduate Programs"

Various professions now incorporate work-integrated learning (WIL) in pre-professional curricula (Smith & Worsfold, 2014). Previously, formal training to support supervisee/supervisor in preparedness has not been available (Smedts, Campbell, & Sweet, 2013), leading to calls for formal training of supervisors (ASHA, 2017). This work considers the perspectives and needs of students as reported through their evaluations of their supervisors. It also identifies the views of supervisors relating to their preparedness for the role and training needs via a survey. The researchers propose the development of a hybrid set of targeted training modules at Kean which support both supervisor and supervisee preparedness and competency in WIL.

Danielle Oakes, Emily Jurcsek, Victoria Giannone
Faculty Advisor: Joanne Christodoulou

"Auditory Accommodations: Can You Hear Me Now?"

This investigation will examine the impact of auditory approaches on standardized speech/language assessments for individuals with hearing loss (HL) by comparing processing time in two aided and one unaided testing conditions. Aided conditions include the PockeTalker (a device that amplifies sounds and "shapes" auditory signals) and increasing speaker volume. The Ross Information Processing Assessment- 2nd Edition will be administered utilizing a split-half research design, comparing processing time in individuals with HL across the three conditions. This research may impact future assessment procedures, specifically, the inclusion of auditory accommodations and to collect more accurate scores while maintaining assessment integrity.

Emily Van Hook, Sarah Duffy, Jamie Lyn Ross
Faculty Advisor: Sarah Patten

"Gender Spectrum Voice Inventory: A Pilot Study"

This is a pilot study to trial the Gender Spectrum Voice Inventory (GSVI), created by two of the three researchers for use by speech-language pathologists (SLPs). The GSVI is a comprehensive assessment of transgender male/female or gender non-conforming (TGNC) clients who seek to modify their voice to be more congruent to their gender identity. A comparable assessment does not exist currently in this field. The study's components include SLPs administering the GSVI as a pre- and post-test on TGNC clients and taking a survey to evaluate the GSVI's validity, usability, and efficacy in the clinical setting. The desired outcome is to show qualitative and quantitative progress of therapy using the GSVI and to gain expert opinion of its features.

Wesley Williams, Chardonnay Adams-Carter
Faculty Advisor: Mahchid Namazi

"How Does Code-Switching of Speakers of African American English Relate to College Achievement"

The dialect, African American English (AAE), has deep historical roots and various linguistic rules used by its speakers. Mainstream American English (MAE) is the dialect used in academic and professional settings. Individuals may change their speaking patterns or code-switch depending on the environment. This study explores the code-switching abilities of AAE speakers in college. Researchers collected language samples and administered a self-created assessment. Results will show the extent to which participants code-switched during these tasks and their ability to change grammatical and phonetic features of AAE to MAE. This research is beneficial to educators because language proficiency is integral to their students' academic achievement.

EDUCATIONAL LEADERSHIP

Patricia A. Ciccone
Faculty Advisor: Soundaram Ramaswami

"The Relationship Between Principal Leadership and Teacher Morale in Four Elementary Schools"

The purpose of this study was to determine if a significant relationship existed between the leadership practices of four elementary school principals and the morale of teachers in their elementary schools in an urban school district in Northern New Jersey. The study used two surveys, the Leadership Practices Inventory (LPI) Self (Principals) and Observer (Teacher) editions to collect information on principal leadership practices, and the Purdue Teacher Opinionaire (PTO) to collect information on teacher morale and job satisfaction. The findings supported that, in all these schools, a positive relationship existed between most of the teacher morale subscales and the principal leadership practices.

Lisa Martin, Rachel Herrington, Irina Nikitovic
Faculty Advisor: Efthimia Christie

"Improving District Knowledge of Mainstream Services for Students with Disabilities In Their District"

Many laws have been established to protect individuals with disabilities. IDEA makes available a free appropriate public education to eligible children and ensures special education and related services to those children. Districts have a responsibility to educate all students within their community in the least restrictive environment possible for their learning needs to be met. The prevalence of autism has grown dramatically in the State of New Jersey. Young children with autism have presented multiple challenges to administrators. The purpose of this initiative is to implement and evaluate an in-house approach when working with children with autism in the school district. This initiative provides a comprehensive program within the District.

Makeba McCray

Faculty Advisor: Soundaram Ramaswami

"Fractionville: Impact of Gamification on Learning Foundational Fractions in the Third Grade"

Schools face an instructional dilemma with how to create a motivational environment where fractions are fun, interactive, and induce problem-solving skills. This situation is challenging at the elementary level because there must be a balance between interaction, gamification, and content delivery. This action research studied the impact of a gamified math program, "Fractionville," developed for third grade students learning foundational fractions in an urban school. The study utilized a quasi-experimental approach to analyze the effects of gamification on students' fraction skills and on teachers' perceptions regarding student motivation and engagement.

NURSING

Lisa Bellingham

Faculty Advisor: Ibtihal Almakhzoomy

"Incorporating Critical Thinking into Early Warning Scoring by Utilizing the Clinical Reasoning Cycle"

Evaluating if Critical Thinking education to nursing staff will increase the accuracy, effectiveness, and improved outcomes of the Early Warning Scoring System as opposed to relying solely on the numerical scale. This will be implemented by utilizing the Clinical Reasoning Cycle to staff nurses through nursing competency education. Documentation of Rapid Responses and Early Warning Scores will be evaluated for a 4-week period after education and implementation of the study. Feedback of the nursing staff will be collected and evaluated. Discussion of the outcomes will be conducted with voluntary staff nurses through a survey which will be comprised of research questions.

Assumpta Ekeh

Faculty Advisor: Ibtihal Almakhzoomy

"Health Beliefs and Knowledge Effects on Intentions Toward Prostate Cancer Screening"

Prostate cancer globally impacts men of African descent disproportionately more than any other ethnicity. Studies focusing on prostate cancer among the U.S. based Nigerian male population, have been limited. Purpose: To investigate the health beliefs and knowledge effects on intentions toward prostate cancer screening among NIM living in the U.S. using select constructs of the Health Belief Model. Design and Sample: This was a quantitative study with a predictive cross-sectional design. Main Conclusions: This study found that immigrant Nigerian men's intention to screen for prostate cancer is predicted by perception of susceptibility and benefits, thus educational programs should focus on susceptibility and benefits.

SCHOOL AND CLINICAL PSYCHOLOGY

Kelsey Edwards

Faculty Advisor: Donald Marks

"Role of Psychological Flexibility on the Experiences of Nurses Providing End of Life Care"

Many individuals facing critical illness receive palliative/hospice care. Nurses are often tasked with providing end of life (EoL) care, yet they receive varying levels of education related to it. During their work, many nurses experience compassion fatigue as well as compassion satisfaction. These constructs are theorized to be related to a nurse's level of education and experience. Nurses' level of comfort in providing EoL care also fluctuates with education and experience. It is hypothesized that exposure to patient deaths may contribute to nurses' experiences of compassion fatigue and satisfaction when controlling for the influence of several factors. Psychological flexibility is predicted to moderate these relationships.

Laura Faiwiszewski

Faculty Advisor: David Brandwein

"Examining the Predictive Utility of the PAI Validity Scales in a Mild TBI Population"

Traumatic brain injury (TBI) is one of the leading causes of death and disability in the United States. Those who have experienced a TBI are often referred for neuropsychological evaluation to determine the impact of the injury on overall functioning, treatment course, and disability eligibility. Assessing effort and validity of test performance is important when making clinical decisions in this population. The PAI is a self-report measure that contains validity scales that may be relevant to ensure adequate effort and symptom reporting. The current study will examine the utility of each of the PAI validity scales in assessing for possible malingering by predicting failure on performance validity tests and compensation seeking status.

Taylor MacLean

Faculty Advisor: Kendahl Shortway

"What About the Siblings?": A Video-Narrative Approach to Understanding Sibling Experiences"

The study will offer a unique perspective on the experience of siblings of patients with childhood cancer. Siblings experience their own version of distress when a sibling is diagnosed, yet there are limited research and resources on this. To gain an understanding of their experiences, adolescent and young adult siblings will be invited to complete a video narrative, as well as complete measures of quality of life, personality, demographics, and post-video impressions. The narratives will be transcribed and analyzed for common themes, which will help to inform future studies on sibling experience with chronic-illness and aid in creating sibling-focused interventions.

Marina Oganesova

Faculty Advisor: Kendahl Shortway

"Obstetrician-Gynecologist Response to Sexual Assault Disclosure"

Sexual assault is highly prevalent in the adult population and social reactions to disclosure of sexual assault have been linked to various outcomes for the individual. Survivors may disclose sexual assault history to medical providers, although there may be barriers to disclosure experienced by both survivor and physician. There is a gap in the literature regarding sexual assault disclosure to gynecologists, and this topic must be further explored, as gynecologists may play an instrumental role in women's recovery. In the current study, I am exploring the way gynecologists approach sexual assault disclosures in their professional practice by interviewing gynecologists regarding their experiences and recommendations in working with sexual assault survivors.

Neil Patel

Faculty Advisor: Jennifer Block-Lerner

"Exploring Exposure to Culturally Diverse Films and Mindfulness and Spiritual Openness as a Moderator"

Higher education is expanding in terms of students' race, ethnicity, religion, and other demographics. This expanded diversity can lead to improvements in cross-racial interactions and classroom environments. Therefore, it may be vital to find novel ways of increasing openness to others of diverse backgrounds. This study investigates whether exposure to a mindfulness-based practice and the film One Track Heart, might foster increased openness to diversity, a sense of common humanity, and receptivity to mindfulness and related practices. Spiritual openness will also be explored as a moderator. Implications for practices that foster openness to diversity, as well as limitations and future directions will be discussed.

Moshe Seplowitz

Faculty Advisor: Donald Marks

"Client Demographics and Mental Health Characteristics as Predictors of Psychotherapy Retention"

Premature termination of mental health care is common and tends to result in poor clinical outcomes. Attrition also demoralizes therapists and wastes clinic resources, and it is important to identify factors that differentiate those who remain in treatment from those who drop out. Obstacles to retention are poorly understood, and this study examines factors that may be associated with longevity and success of treatment. It is hypothesized that client demographic variables and mental health characteristics will be associated with longevity of treatment and dropout at a psychology training clinic. Increasing our understanding of dropout can support the development of interventions geared toward increasing retention and improving outcomes.

Jacob Stier

Faculty Advisor: David Brandwein

"Parental Capacity Assessment Recommendation Outcomes Utilizing the PAI Scores and Violence History"

Legal and child welfare systems utilize parental competency assessments (PCA) to determine a parent's ability to provide for the current and predicted needs of a child secondary to a claim of abuse or neglect. The Personality Assessment Inventory (PAI) is an empirically supported assessment measure often used alongside interview and record review in the PCA process. This study will analyze relevant PAI scale scores and a history of violence in a PCA sample to determine the extent to which these variables account for parental capacity recommendations. Determining the extent to which these variables account for these recommendations is posited to provide insight into the clinical decision-making process for future PCA evaluators.

NEW JERSEY CENTER FOR SCIENCE, TECHNOLOGY AND MATHEMATICS

Priscilla M Chinchilla

Faculty Advisor: Dil Ramanathan

"A Chemical and Biological Analysis of the Healing and Destructive Properties of Cinchona officinalis"

The first treatment for Malaria was extracted from the Cinchona tree. Research has indicated that it has other healing properties that can treat skin lesions and rashes. Personal accounts have noted that a tea made from the bark is used to induce abortions in native pregnant women from South American countries. The compounds responsible for C. officinalis' healing and destructive properties have not been analyzed. Gas Chromatography-Mass Spectrometry (GC-MS) was used to identify these compounds. Biological assays such as anti-inflammatory and antibacterial will be used to confirm these medicinal properties. Results have shown that C. officinalis has destructive and healing properties that potentially can be used as traditional medication.

STUDENT EXHIBITS AND PERFORMANCES

COLLEGE OF EDUCATION

CURRICULUM AND TEACHING

Antonia Kitsopoulos, Joseph Laurino Jr., Patricia Marshall
Faculty Advisor: Lynn Schraer-Joiner

"How Rock Band Has Changed Our Lives: Charting the Music-Making of Adults with Special Needs!"

The study chronicled the impact of learning and playing popular music on the QOL of five special-needs adults. Participants' interests in learning to sing and perform their favorite rock music were highlighted to provide opportunities for creativity and socialization. Video recording of rock band rehearsals, concerts, participant and caregiver interviews, and rock band workshop experiential surveys were examined by four reviewers using a priori coding with present codes related to Schalock's (2004) QOL dimensions. Initial findings suggest that performing promotes QOL in the areas of emotional and physical well-being and interpersonal relations. Emergent codes included impact on emotional/physical triggers and improved demeanor.

Research supported by: Students Partnering with Faculty (SpF) summer research program, Kean University

COLLEGE OF LIBERAL ARTS

ART HISTORY

Gianna Azzinnari, Raechel Kronyak
Faculty Advisor: Lewis Kachur

"Dada and Design: A Look at the Link Between the 20th Century Dada Movement and Modern Design"

Dadaism was an art movement that celebrated mockery of social norms, war politics, and the bourgeoisie. Artists during this era questioned art, its purpose, and their role in the process. Looking at the design elements used in their work, such as typography and poster composition, we were able to make connections between their style and modern graphic design. This connection inspired us to craft a zine featuring artists of the Dada movement, using our education in design as well as taking key elements from their personal style. We also created a unique motion video inspired by the famous live performances put on at the Cabaret Voltaire in Zürich Switzerland.

THE DOROTHY AND GEORGE HENNINGS COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY

COMPUTER SCIENCE AND TECHNOLOGY

Reynold Augustine Beaton
Faculty Advisor: Ching-yu Huang

"Interactive Web Design"

Information technology has changed the way society obtains knowledge. The medium for this powerful tool is the Internet- a network of computers and information displayed through websites that allows users to read and manipulate information for their advantage, pleasure, or advancement. The building of an interactive website involves back and front-end development; the front allowing a user to see data in a meaningful and pleasing way, the back allowing a user to interact with products, information, and data in concrete and often monetary way. The purpose of this project is to create a portfolio that displays solid back-end processes, such as PHP, MySQL, and Python for interactivity with a user.

Nisarg Modi
Faculty Advisor: Kazi Zunnurhain

"A Survey Research on Vulnerabilities of Connected Devices with Human Interaction"

All the smart devices around us are connected via Wi-Fi or Bluetooth to interact with each other. These devices are the means of the Internet of Things (IoT) network. These connected devices can make human life very comfortable. The key component of these devices is Bluetooth connectivity for wireless communications. It provides a low-energy and low-cost solution for short-range radio transmission. Bluetooth, more specifically Bluetooth Low Energy has become the predominant technology for connecting IoT devices. This technology is also available in cell phones, headsets, speakers, printers, keyboards, automobiles, children's toys, etc. In this research study, we have investigated the possible demerits of connection technologies and at which circumstances. We intend to propose an architecture in the future to prevent any attack in IoT networks.

MATHEMATICAL SCIENCE

Rosana Oliveira
Faculty Advisor: Raymond Viglione

"Visualization by Inclusion"

Visual proof in mathematics is an important and enjoyable way of understanding why certain mathematical statements are true. Here we explore the visual proof technique of inclusion. In particular, when set A is a subset of set B, then any measure of A and/or its elements must be less than or equal to the respective measure of B and/or its elements. We employ this technique to prove a suite of theorems involving the arithmetic, geometric, root mean square, and harmonic inequalities.

MICHAEL GRAVES COLLEGE

ARCHITECTURAL STUDIES

Eric Anderson, Matthew Serrano
Faculty Advisor: John Hartman

"Imagination Station"

Imagination Station is an architectural intervention that aims to look at the suburbs as deconstructed layers in a tower archetype. Through the interconnectedness of programs, the tower offers suburbanites with unmatched ease of accessibility. To combat some of the tendencies of modern typology, we have implemented equal-sized housing, which aims to break the hierarchy received through social class, and have played with scale, creating over and undersized program-oriented structures that look to offer day-to-day experiences 24/7.

Jada C. Bautista
Faculty Advisor: Craig Konyk

"Film in Public Spaces"

In this project, we were to construct a 1/20th scale model that consisted of 3 spaces for the public to view movies. These spaces were to be created based on 3 different movie genres that were assigned to be either primary, secondary, or tertiary. I personally chose adventure for primary, comedy for secondary, and romance for tertiary. Over the course of the semester, we learned, separately, about each of the elements within this model: lines, streets, spaces, and hierarchy.

Gabriel Emmanuel Castillo
Faculty Advisor: Craig Konyk

"Architecture Manipulation"

The modern world is plagued with various amounts of noise pollution that inflicts an unwelcoming experience on the immersion of a particular individual. Woodbridge Center Mall is a perfect example of how modern infrastructure affects our experiences with dull parking lots to monotonous sounds from the highways nearby. Our mission was to promote emotion and memorable ecosystems of acoustics, community, and circulation. The solution to make this center a welcoming immersive experience is as follows: to implement coniferous trees around the site of Woodbridge Mall adding sounds of animals, birds chirping, rustling leaves, and winds to dynamically impose personal and social green spaces.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Ashley Catarino
Faculty Advisor: Craig Konyk

"Making Beacon New York a Place to Visit."

Beacon, New York does not have many things to do or visit. The question is, what would bring people into this specific town architecturally. Getting the chance to visit Beacon, I noticed that there is not many activities to do. I decided to create an aquarium in a park near the Hudson River in Beacon, New York. This would bring people to the city of Beacon because the closet one around is about 20 miles away. An aquarium would bring life to the city and different types of sea creatures as well. This would be a hotspot in Beacon due to the fact that the Ferry boat is near the site as well as a train station and a zip car area. It would be a great experience for people to see the aquarium when they first come into Beacon New York.

Anthony DiGeronimo, Lucas Castellane
Faculty Advisor: Craig Konyk

"Liberty Hall: An Architectural Jigsaw Puzzle"

Liberty Hall is a building with many histories, changes, and forms. In the past semester, my team and I have been uncovering and documenting the various historic architectural plans and cross-referencing them to written memoirs and transcripts. From this, we were able to create an accurate timeline, thus observing exactly how the building changed and formed to create what we see before us today. Our next stage is to create something physical to represent the various phases of construction that one may be able to uncover through interaction — a 3D architectural jigsaw puzzle.

Mikaela Erazo
Faculty Advisor: Craig Konyk

"Unfolding the City of Beacon"

The approach of my building comes with the concept through density, especially in the site we are working on, which is Beacon, NY, since the market density area is condensed in Main St. My main thesis consists on the expansion through a potential site to allow people from the upper side of Beacon to have something closer to them to serve more as their convenience. Also, the design of my building comes with the idea of representing a focal point of attraction. That is why my building is considered a monumental building. My building not only offers the desire and necessity of a marketplace, but it also allows for people to experience different environments. Since Beacon is a city full of art, I wanted to incorporate some of the roots of the city.

Jeremy H. Gusset

Faculty Advisor: Craig Konyk

"Living Cemetery"

Cemeteries are spaces that exist in every community throughout the world. There is an opportunity to repurpose these places that are only used to commemorate the dead by adding additional uses for the living. At a time when land in urbanized areas is becoming increasingly more scarce, it is urgent to give cemeteries more than a single function. Our research focuses on design interventions that could complement the traditional headstones and monuments, for a sustainable approach that could be implemented anywhere. The goal is to keep the memories of those who have passed alive through the activities of the living who will interact with these new monuments, and in the process, become active present-tense commemorations of the deceased.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780, U.S. Department of Education, Ronald E. McNair Post-Baccalaureate Achievement (McNair) Program, P217A170003

Jared Quentin Mills

Faculty Advisor: Craig Konyk

"Films Within Public Spaces"

For this project, I had to create 3 different spaces that would hold public films for people to watch. I went with the three genres of comedy, war, and horror within the spaces. This model is a 1/20th scale project that illustrates the use of primary, secondary, and tertiary spaces along with primary, secondary, and tertiary streets. This teaches an architectural student how to differentiate the hierarchical levels of spaces, streets, and buildings on a site. With the use of foam board and tacky glue, this model came to life showing different public theater spaces and streets to connect them all.

Santiago Rada

Faculty Advisor: Craig Konyk

"Beacon, New York Center for the Fine Arts"

I wanted to propose the Center of the Fine Arts, an attraction center to Beacon that connects and brings locals closer to the arts through therapeutic art programs. While observing Michael Heizer's work, I saw a common style in his art. He tends to create voids in areas that are pure and untouched. He disrupts it with these rich geometric shapes and lines, these voids for say. I got inspired in seeing his work and it made me think in ways to use these voids to create livable or functional program spaces. Beacon's rich connection to nature and land lead me to propose the idea of leaving the above ground as pure as can be and instead using the ground itself as the building's main material.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Charles Raimondo

Faculty Advisor: Gabriel Fuentes

"Public Architecture and Urbanism as Environmental Remediation"

This project combines remediation processes as carried out by the United States Environmental Protection Agency (EPA) with phased urban design strategies and architectural interventions that turn contaminated and wasted land along the NJ Transit Raritan Valley Line into dynamic public spaces. In doing so, it operates at a gradient of spatial, systemic, and temporal scales. It asks: can the remediation process yield public and programmatic value for architecture and urban design? It addresses this question by exploring the process of converting brownfields into playgrounds.

Yanaisey Rivera

Faculty Advisor: Craig Konyk

"Mapping of Beacon, New York"

Beacon, New York is an area that is able to give a tourist the feeling as if they were to have walked into a different decade. The city is full of antique stores, thrift shops, small restaurants, small owned businesses, etc. The purpose of mapping the area around Beacon, New York, was to find where there is more land area, mountain areas, higher population, lower population, etc. With this information gathered, I then proceeded to find different locations in these areas so that someone who is visiting will be able to enjoy and have different activities to choose from. Also, the map itself was hand-drawn. The way that I perceived the map was to try and replicate exactly how it is shown in Google Maps so that it is easy to read for anyone.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Sara S Ventura

Faculty Advisor: Craig Konyk

"Representing and Explorations of Beacon, New York"

Beacon is a small city located in Dutchess county, New York. This research was conducted to emphasize the natural vs artificial aspects, while explaining the history of the areas surrounding Beacon. By exploring the site and environment of Beacon and the surrounding cities, I was able to find and prepare a site for a future architectural plan. All of the research conducted is put together in a map. Using pencils, color pencils, and different line weights, the sense of hierarchy is present in this map: highways, main roads, and small roads. The mapping shows the different ways people can get to Beacon and is set on a specific time and day of the week showing high and low traffic areas near Beacon.

Research supported by: National Science Foundation, Louis Stokes Alliance for Minority Participation (LSAMP) program, HRD-1400780

Luis Zorrilla

Faculty Advisor: Craig Konyk

“The Dock”

My project was researching, mapping, and exploring the needs in Beacon, New York. My Architectural proposal was a structure that served as a kayak storage in Long Dock, Beacon, and replaced the existing one. The architecture came to be more for kayaks than for the people themselves, yet also explored how the structure would fit into the environment and the people visiting. This new design would provide for more kayak storage and by that would also bring more people into Long Dock.

DESIGN

Peyton Dey

Faculty Advisor: Jobeth Bobee

“Finger Treadmill”

The Finger Treadmill is designed for endless play. This fidget toy is designed for anyone who has ever experienced boredom in a social setting. The toy grabs the user’s attention and locks them in an endless loop of satisfaction. The design went through an iterative process and ergonomics of the product became an import focus early on. With a softer form and observation, the Finger treadmill became more intuitive for the user and enjoyable to use.

Pablo Galao Birkmann

Faculty Advisor: Jobeth Bobee

“3D Printing”

Can you use a 3D printed part for product testing? How much function and detail can you get from a 3D printed test model? Industrial designers use 3D printing all the time, but what are its limits? Models were printed at different tolerances and in different orientations to test function and strength. The material chosen and the machine they were printed on played a large part in the success or the failure of the parts.

Jacqueline Hernandez

Faculty Advisor: Jobeth Bobee

“You are my Sunshine”

This product is designed for people who recently got keys for the first time. The purpose of the keychain I made was to help people remember how beautiful life is and increase their happiness as they go with their day. The importance of industrial design that this product demonstrates, is that it takes all the steps into account to make products. Industrial design is a combination of engineering and art that helps solve problems that arise in everyday life. In conclusion, it helped me explore materials, colors, and it enhanced my 3D modeling/ computer rendering skills. The result was a good model of a keychain that has a lot of symbolism and that has good packaging to attract the consumer’s attention.

Adam Oates

Faculty Advisor: Robin Landa

“Hate Spotter: Exposing White Nationalism”

The average citizen does not realize that White Nationalism has been on the rise, and White Nationalist members are holding high-ranking spots in the government. Strategy: Use media platforms to raise awareness of this social justice issue. Team up with the Southern Poverty Law Center to create an app to track racist activity.

Drew Spahn

Faculty Advisor: Jobeth Bobee

“Piston Head KeyChain”

The Piston Head key chain was developed to investigate the elements that make up something as simple as a key chain, while still having a story that drives its purpose. This project was important to understand the prototyping process in the Industrial Design field using 3D - printing and to go through multiple versions to solve any potential issues with the design. I started sketching while thinking about my interests and how this keychain could appeal to others and still be personal to me. Taking these sketches into a 3D modeling software called Fusion 360, I was then able to print out my model using a 3D printer. I have concluded that while my initial thoughts were sold, some aspects of the design did have to change in order to gain interest from others. Therefore the prototyping analysis process was a success with a better product after each revision.

SPECIAL PRESENTATIONS

Erin Alghandoor

“Stand Out Academically with a World-Class Collection”

Liberty Hall Academic Center and Exhibition Hall offers 300+ years of primary sources about politics, gender, education, and more. There’s something for everyone. The Special Collections Research Library and Archive at Kean University welcome our community and the public to access collection material at our beautiful new facility. Our goal is to preserve and provide public access to our historical correspondence, Congressional papers, institutional records, and rare books. In this session, you will learn how to find and handle archival material, discover our unique collections, learn about the history of Kean University, and best of all, experience the “wow” of deciphering primary sources. This is the experience that will prepare you to stand out on your next project and highlight on your resume.

Mukul Acharya, Julia Nevarez, Bok Jeong, Gabriel Ertsgaard, Tom Walsh, Aaron Gubi

What can YOU get from Assessment?

Assessment is a requirement for all of Kean University’s programs, and while it may feel like a chore, this panel from the Senate Assessment Committee will explain how YOU can potentially benefit from implementing regular assessment strategies. The panel will accept your feedback about the assessment process at Kean using a SWOT analysis (strengths, weaknesses, opportunities and threats), and address ways to streamline assessment measures within your department to maximize benefits and successes with the process. As the university approaches our Middle States re-accreditation period, this is a discussion you won’t want to miss.

ACKNOWLEDGEMENTS

2020 KEAN RESEARCH DAYS

Research Days has grown into such a large event that it requires the efforts of many to be successful. The Office of Research and Sponsored Programs would like to acknowledge the support and hard work of the people who made Research Days 2020 possible.

We thank President Farahi for his generous support of Research Days since it began in 2009, of the Students Partnering with Faculty program since 2004, for his support of the Center for Undergraduate Research, and for the creation of the Freshmen Research Initiative.

Thanks also to Provost Jeffrey Toney for his support of faculty-mentored student research in all forms, for his encouragement for ever more students to participate in Research Days, and especially for providing student stipends for research and internships and supporting student travel to conferences.

Thank you to Michelle Fabio of the Writing Center and her eagle-eyed team for proof reading the program book and to University Relations for their support transforming Research Days 2020 to a web-based experience, especially Danielle Ford for her assistance with creating the website, Joey Moran for the program book, Manny Vozos for the videos, and Rob Weber for social media.

Thank you to the entire ORSP staff who all learned new skills in record time this year in order to convert Research Days from an in-person to a web-based event, especially Reenat Munshi, who organized and managed all aspects of Research Days, Orella Chichester for her excellent work with student registrations and communications, and to student worker extraordinaire, Syed Nadeem, without whose technical expertise and dedication we would never have made the deadline.

Thank you most of all to the hundreds of faculty mentors and students who, despite the disruption to their academic routines and personal lives caused by COVID-19 and the change to remote education, still found the time and energy to participate in this joyous celebration of research and creative work. You are wonderful!

2020 KEAN RESEARCH DAYS

KEAN

The Office of Research and Sponsored Programs provides assistance in all areas of external grant funding to the Kean University community. ORSP provides information, services and support to assist faculty and staff to compete successfully for external funding to conduct research and scholarship; engage in creative work; develop curriculum; advance student learning; aid recruitment and retention; and, support campus programming and community outreach.