

**2024 Student Conference and Showcase
Student Abstracts**

AUTHOR(S): Morgan Akins

TITLE: The Effects of Social Media Use on Anxiety and Stress

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: There is past research that indicates a relationship between an individual's social media usage and their mental health. The present study uses an online survey to examine how the time that an individual spends on social media daily will impact their stress and anxiety. The hypotheses for this study are that social media will increase an individual's anxiety and stress and that women will spend more time on social media than men. The future results will provide support for the current hypotheses. These results will provide support for the negative impact that social media usage can have on an individual.

AUTHOR(S): Morgan Akins

TITLE: Underrepresentation and Stereotypes of Females in Animated Films

FACULTY SPONSOR: Sara Hare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study analyzes the differences in male and female character portrayal for the top 150 grossing animated films between 1990-2022. The focus of this specific study is lead characters, speaking roles, occupational status, female bodies, and the Bechdel test. Analysis of these factors found that female characters are often presented in a stereotypical way and oftentimes underrepresented. It is important to look at this difference in gender presentation in films due to the effects that it may be having on its audience.

AUTHOR(S): Vanessa Alcantar, Elizabeth Alfonso Ortiz

TITLE: Social Media, Self Esteem, and Upward Social Comparison

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Our study focuses on how excessive social media use affects self-esteem and leads individuals to compare themselves with others. This is an important topic considering social media is part of our daily lives, and understanding the advantages and disadvantages is essential. The expected findings seek to discover a negative relationship between excessive use of social media, self-esteem, and social comparison; therefore, we hypothesized that "frequent social media use has a negative effect on self-esteem" and "frequent upward social comparison leads to lower self-esteem."

AUTHOR(S): Stephanie Alfaro, Katie Medlock

TITLE: Empowering Nursing Students: A Volunteer Initiative to Serve the Homeless

FACULTY SPONSOR: Tonya Broughton

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Indiana has approximately 5,258 residents experiencing homelessness and 887,070 who lack food access (Move for Hunger, 2023). The soup kitchen in Jeffersonville, Indiana is a charitable organization which serves six meals weekly to support the Clark County community. IUS Senior Nursing Students prepared and served meals weekly for the homeless population, actively observing their nutritional status to address food insecurity. Students also provided education on local resources for clothing, food, treatment, and counseling. Donations were also gathered in order to create bags with hygiene necessities and warm items for winter. This poster will present the support, education, and resources for the homeless in Southern Indiana.

AUTHOR(S): Kasady Anderson

TITLE: Gender Inequality in Animated Films

FACULTY SPONSOR: Sara Hare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sociology

ABSTRACT: This study examined the gender inequality in animated films through 1990-2023 in the 150 top grossing animated films. In my paper, I focused on underrepresentation of women through many different tests. The study that I conducted found that females are underrepresented in speaking roles. This study also describes whether films pass the Bechdel test, jobs inside and outside of the home, unrealistic body types, and sexy/revealing clothing. The underrepresentation of women in children's animated films can play a major role in society, how viewers see other females, and how they view other children's animated films.

AUTHOR(S): Olivia Arnold

TITLE: No Strings Attached

FACULTY SPONSOR: Tiffany Carbonneau

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Fine Arts

ABSTRACT: This project includes documentation and overview of a large-scale art installation created during the Undergraduate Student Research/Creativity Fellowship in Fall 2023. This piece utilizes animation, dramatic audio, and projection mapping technology to create a compelling story that is both aesthetically pleasing and conceptually intriguing.

AUTHOR(S): Eldar Avdic

TITLE: An AI Approach to Decision-Making in Adversarial Games

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we harness the potential of artificial intelligence (AI) in transforming how we approach problem-solving and strategic thinking. To that end, we explore the application of the Minimax algorithm in the game of Tic-Tac-Toe. This project demonstrates how AI can be used to enhance decision-making processes in adversarial games. By examining how changing the exploration depth alters the

difficulty of playing against an AI, we gain insights into the workings of the Minimax algorithm. This project can be used as a template for other research work like developing AI for more complex games or real-world decision-making scenarios.

AUTHOR(S): Bailey Beck

TITLE: The Proliferation and Treatment of Human Lung Cancer Caused by Mutant p53

FACULTY SPONSOR: Margaret Wallen

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: The tumor suppressor p53, when mutated, produces misfolded proteins whose accumulation is associated with the development and progression of lung tumors. Mutant p53 was cloned into an expression vector using Neomycin as a selective agent. The plasmid was transfected into human lung cancer cell lines H1299 and A549 to examine transient and stable expression. Western blots and qPCR techniques were used to quantify degree of expression. These cell lines were co-treated with chemotherapeutics Paclitaxel, Cisplatin, and Doxorubicin to assess the role of this mutation in resistance to these drugs. The cells' overall survival was assessed using cell viability assays.

AUTHOR(S): Levi Bennett

TITLE: Race and Gender Identity's Contribution to the Relationship Between Personality and Music Preference

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: The study explores how racial and gender identity affect the relationship between music preference and personality. We hypothesize that gender (cisgender, transgender) and racial identity (black/African American and Latin/Hispanic) will relate to personality, which will thus relate to music preference. The study will utilize an (online) survey using convenient sampling. Expected results will show that racial and gender identity will play a role in the relationship between personality and music preference. The study will suggest that various aspects of ourselves (identity) relate to our personality, which in turn play a role in our (music or general) preferences.

AUTHOR(S): Colby Bentley

TITLE: Comparative Analysis of Rent Affordability: Louisville and Its Neighbors

FACULTY SPONSOR: Ranida Harris

EDUCATION LEVEL: Graduate

DISCIPLINE: Business Administration, M.B.A.

ABSTRACT: This project delves into the complexities of rent affordability in Louisville, Kentucky compared to neighboring cities, employing a comprehensive dataset from the U.S. Department of Housing and Urban Development (HUD). Through a detailed analysis utilizing the Cross-Industry Standard Process for Data Mining (CRISP-DM), we explore trends, patterns, and outliers in housing costs. Our findings aim to highlight areas of concern and potential policy interventions to improve rent affordability. This comparative study not only sheds light on the current state of housing affordability but also serves as a crucial tool for economic planning and social welfare enhancement.

AUTHOR(S): Bailey Black, Jalen Gornek

TITLE: Sustainable Benefits of Utilizing the Bicentennial Trail on Indiana University Southeast Campus

FACULTY SPONSOR: David Taylor

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: The wooded area at Indiana University Southeast (IUS) is often overlooked despite comprising one-third of the campus. The Bicentennial Trail, traversing this area, presents untapped potential to strengthen the campus-community bond, bolster environmental education, and enhance student life. Proposals include researching improvements to the trail and potentially adding a path from the Observatory to the railroad trail behind campus. Given existing infrastructure, minor modifications offer significant benefits with minimal resource usage. Renovations aim to benefit both IUS and the surrounding community, capitalizing on this underutilized asset to foster mutual growth and enrichment.

AUTHOR(S): Timothy Blalock

TITLE: The Effects of Extraversion and Emotional Stability on Smartphone Dependency.

FACULTY SPONSOR: Todd M. Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Smartphone dependency is a rising topic of interest due to increasing rates. Multiple factors can influence the development of dependence, with my two factors of interest being emotional stability and extraversion. I hypothesize that both of these factors are going to negatively correlate with smartphone dependency. Data will be collected via online surveys formulated with data from peer reviewed articles. Hopefully this research can continue to aid researchers in developing treatment and prevention services to combat this developing condition.

AUTHOR(S): Amber Blankenship, Kaitlyn Burdine

TITLE: The Effects of Social Media Use on Disordered Eating Attitudes

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study aims to analyze the potential correlation between the daily average of time spent on social media and the risk of disordered eating habits. Additionally, we are interested in seeing whether or not female participants are more susceptible than male participants based on their social media usage. This topic is important because disordered eating attitudes are associated with eating disorders and depression. It is hypothesized that social media use will positively correlate with disordered eating attitudes, and that women will have a higher correlation than men.

AUTHOR(S): Caitlin Boeschel, Clara Sellers, Joshua Daugherty

TITLE: Proposal for an IU Southeast Landscape Management Plan: Biodiversity as a Unifying Theme for Campus and Community Engagement

FACULTY SPONSOR: Randy Hunt

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: Biodiversity loss is a global issue that requires action at all levels of society, including within universities. With over 175 acres of mixed landscapes, IU Southeast has the responsibility to manage land in a way that enhances biodiversity and the opportunity to provide a regional showcase for its commitment to a sustainable and healthy future. We propose that effective landscape management requires an adaptive landscape management plan that is implemented by a campus planning committee. Our plan emphasizes how targeting biodiversity can be leveraged to increase the engagement and mental and physical well-being of our campus and regional community.

AUTHOR(S): Caitlin Boeschel

TITLE: Proposal to Add Sustainability and Regeneration Components to Already Existing Core Classes at Indiana University Southeast

FACULTY SPONSOR: David Taylor

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: With an ever-changing climate, it is vital that we protect our planet and its natural resources while gaining the knowledge of how to do so. Adding components of sustainability and regeneration to existing classes at Indiana University Southeast will help students gain the knowledge they need to face global problems. Higher Education all around is starting to incorporate sustainability into their teachings. This includes all three pillars of sustainability and regeneration: environmental, social, and economic. By adding sustainability and regeneration to core classes, IUS will enhance personal lives, improve our college campus, and solve problems on a global scale.

AUTHOR(S): Alexis Bostock, Mackenzie Spalding

TITLE: The Exploration of DoobyDoo and Specific Bacterial Phage Functions

FACULTY SPONSOR: Beth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: General Studies

ABSTRACT: The current study is on a specific bacteriophage DoobyDoo and each feature within the phage. We are finding the specific features of this genome in order to answer the research questions: "Is it a gene? If so, where does it start? And what is the function?" We are using multiple computer programs in order to do so. By using these, we are able to break down specific features and look at them in depth. After collecting and annotating all the features, they will be sent off to be double checked and published.

AUTHOR(S): Chelsea Boudreau-Burwell

TITLE: Patient Safety in the Perioperative Area: Perioperative Nurses' Perceptions of Patient Advocacy and Speaking Up

FACULTY SPONSOR: Carla Hermann

EDUCATION LEVEL: Graduate

DISCIPLINE: Nursing, M.S.N.

ABSTRACT: Surgical complications are the third leading cause of patient mortality in the United States. The literature hypothesizes that a perioperative-specific safety practice called surgical consciousness, understood through the perspectives of perioperative nurses, is the most effective means to ensuring positive patient outcomes. The purpose of this study is to explore perceptions of surgical consciousness, specifically advocacy and speaking up, among nurses at a level-one trauma center. The study has a qualitative design with a narrative approach, and data will be collected through in-depth interviews. Results from this study could help improve patient outcomes in high-risk surgical departments.

AUTHOR(S): Joe Bradley

TITLE: Exploring the Link Between Food Insecurity and Chronic Illnesses Nationally and Locally

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Graduate

DISCIPLINE: Interdisciplinary Studies, M.I.S.

ABSTRACT: Much has been written about how the COVID-19 pandemic highlighted many health disparities in the United States. This proposed project is an exploratory case study to discover a possible link between food insecurity and chronic health conditions and how they were both impacted by the COVID-19 pandemic. Research will focus generally on the state of Indiana, and when available, it will focus more specifically on Clark County, Indiana. A conclusion will suggest some possible interventions.

AUTHOR(S): Avery Brewer

TITLE: Relationship Between Diadema Antillarum and Coral Cover in the Red Sea

FACULTY SPONSOR: Omar Attum

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: My presentation reviews the impacts pollution, climate change, and disturbance have created for coral reefs. With unbalanced environmental conditions, there is an imbalance in coral coverage and Diadema antillarum (sea urchins). They have a relationship that is usually symbiotic and is now threatened. My research had me work with a database where I trained an AI to identify over 500 underwater images from Ain Sukhna in Egypt to find a relationship between coral and urchins so that solutions can be made.

AUTHOR(S): Sebastian Burman, Xiaokun Li, Jonathan Roberts

TITLE: No Kill Shelter Check In System

FACULTY SPONSOR: Ronald Finkbine, John Doyle

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: The project focuses on implementing a text message-based check-in system for the No Kill Louisville Shelter. This solution enables visitors to conveniently check in upon arrival in their vehicles, significantly reducing the need for staff and volunteers to manually collect information from each car. This system streamlines the check-in process, making it more efficient and less time-consuming, but also effectively

addresses the challenge of operating with a limited number of volunteers, thus enhancing overall efficiency at the shelter.

AUTHOR(S): Samantha Burnett, Ruby Quinn, Elyse Kristiansen, Fadumo Mahdi

TITLE: Educating Healthy Aging

FACULTY SPONSOR: Janice McMahan

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: The WISE program teaches important topics to senior citizens that will encourage them to enhance their quality of life by promoting healthy aging, diversity, and medical autonomy. To effectively provide this education, Indiana University Southeast Senior Nursing Students taught classes for six weeks at two senior care/assisted living facilities. These lessons included educational information with activities to reinforce the key points that were discussed. Group activities also encouraged participation and socialization among the class. This poster will present the topics shared with WISE program participant as well as participant reviews of the program itself.

AUTHOR(S): Ciara Burns, Sadie Rosenberger

TITLE: Genome Annotation of Bacteriophage DoobyDoo

FACULTY SPONSOR: Beth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: The goal of SEA-PHAGES, a national organization, is isolating, purifying, and characterizing bacteriophages, as well as annotating the genome of bacteriophages. Looking at these sequences can help us understand the functions of proteins. The fall semester isolated bacteriophages, including DoobyDoo. Over winter break, the genome was sequenced. Our research is focusing on annotating the genome using multiple computer programs. We've determined whether features are genes, where they start, and their function. As we look at more bacteriophages and continue to compare them, we will continue to learn about functions. Research into these bacteriophages can help treat antibiotic resistant bacteria.

AUTHOR(S): Kerri Byerly

TITLE: Evaluating the Impact of Educational Interventions on Knowledge in Kidney Transplant Recipients

FACULTY SPONSOR: Carla Hermann

EDUCATION LEVEL: Graduate

DISCIPLINE: Nursing, M.S.N.

ABSTRACT: Quality education is critical for post-transplant compliance and organ survival in transplant recipients. Patients often lack the knowledge and ability to cope with the complex regimen required to care for a transplanted organ. Further research to identify knowledge gaps and improve education strategies is necessary. The purposes of this project are to: (1) measure health literacy of kidney transplant recipients; (2) assess recipient knowledge levels to evaluate the effectiveness of educational interventions; and (3) provide recommendations for patient education to increase patient

knowledge. Results will inform education for transplant recipients with the goal of improving patient and organ survival.

AUTHOR(S): America Castaneda

TITLE: How Does Exposure to Poverty and Violence Affect Academic Success: A Study of Effects on the Learning Development of Children to Adults

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: My passion for kids runs deeper than just what they learn in the classroom. Studies have proven that what happens around us and our kids affects their educational outcomes, their learning development, and their academic success. Therefore, my research project will study the effects that exposure to poverty and violence has on academic success. I will be conducting research on the children demographic starting from ages 5 and up. I will examine variables including substance abuse, poverty and violence that result in the downfall of academic success.

AUTHOR(S): Gabriella Caudill, Caleb Alstott, Madison Wilcox

TITLE: Amish Community Health Fair

FACULTY SPONSOR: Linda Wells-Freiberger

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: The Amish community of Southern Indiana follows cultural practices that are different from those encountered in traditional American culture. Amish healthcare practices are different from those encountered in the conventional medical model. IU Southeast Senior Nursing Students provided health screenings to school-aged children in the Amish community. Feedback from the results of the screenings were given to the child's parent with a health department referral, if necessary. Data was collected from five different Amish schools. This poster will present the health data collected from Amish community schools and its impact on healthcare utilization.

AUTHOR(S): Taylor Chamberlain

TITLE: Mental Health on the Run: Possible Correlational Relationships Between Exercise Frequency, Substance Use, and Depression

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: In this correlational study, I am aiming to analyze the relationship between exercise, substance use, and depression in adults 18 and older. Participants will be recruited via social media to complete an anonymous survey for no monetary compensation. Survey questions include demographics, physical disabilities, injuries, depression diagnosis, exercise frequency, substance use/frequency of use, and the CES-D scale. Data has not been collected yet. Data will be analyzed to determine a relationship between the three variables. I expect to find that as exercise frequency increases, depression will decrease, and as substance use increases, depression increases while exercise frequency decreases.

AUTHOR(S): Alexandria Chastain, Amna Alany

TITLE: Exploring the Relationship Between Social Media Usage and Depression

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: We are looking at Instagram, Snapchat, Twitter, and Facebook and how time spent on those specific social media platforms affects depression and anxiety levels. This topic is important because nearly everyone uses social media and spends excessive amounts of time on these apps. There have been cons to people's mental health since social media has become popular, and we are trying to find a correlation. The hypothesis is that the more time spent on social media, the more depressed and anxious someone will be, and that Instagram will have the biggest negative impact on depression and anxiety.

AUTHOR(S): Mariah Clark

TITLE: Gods or Angels? The Inspiration Behind Tolkien's Mythology

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Philosophy

ABSTRACT: Is God the only one? In this study, the divine council in the Bible and Tolkien's Ainur are compared. This project utilizes literary analysis through the lens of new historicism and a review of select theological commentary on specific bible verses. The divine council is a term either referring to gods or angels and the Ainur are gods in the *Silmarillion*, the history book for all of Tolkien's works concerning Middle Earth. Conclusions are drawn through verses taken from the Jerusalem Bible, commentary from theological scholars on these verses, and a deep dive into the gods of Middle Earth.

AUTHOR(S): Alizae Claxton, Benjamin Herman

TITLE: The Power of Parenting: Exploring the Relationship Between Mental Health & Parenting Styles

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: We are investigating how parenting styles correlate with mental well-being in young adults (18-27). We hypothesize that harsher parenting will relate to higher depression/anxiety and lower life satisfaction. Using Qualtrics, we'll distribute the survey via social media as well as using our Indiana University Southeast networks, aiming for 30 participants. Self-report measures like DASS21 and Satisfaction With Life Scale will measure the participants' mental health. Data collection will begin soon, offering insights into parenting's impact on young adults' mental well-being.

AUTHOR(S): Cora Cole, Hannah Brown, Emma Arnold, Isabell Claywell

TITLE: Knowledge Retention of OB Simulation Skills

FACULTY SPONSOR: Tonya Broughton

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Obstetrics Simulation (OB SIM) is a specialized nursing scenario where IUS junior Nursing students may lack confidence. IUS senior Nursing students identified skills used in OB SIM, including an intravenous piggyback, intramuscular injections, sterile techniques and foley catheter insertion, to study knowledge retention and skill confidence of junior students. A pre/post-test was created by senior students to evaluate knowledge, confidence levels, and learning techniques of the juniors. This poster will present strengths and weaknesses of nursing skill knowledge retention and application. It will identify practices to strengthen knowledge retention and skills in weaker areas of junior Nursing students.

AUTHOR(S): Nicholas Coles

TITLE: Enhancing Customer Satisfaction Through Automated Ticket Resolution

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: This research addressed the critical need for efficient IT ticket management for today's fast-paced business environments. By default, manual ticket management processes can be cumbersome and error-prone, resulting in delays and diminished customer satisfaction. Our project aims to revolutionize this by automating the ticket management process utilizing ServiceNow's powerful workflow engine to create business rules and automated scripts. These innovations will streamline the processing of incoming tickets improving ticket resolution times and reducing human error. Moreover, this automation will free up valuable time for the IT support team, allowing them to focus on enhanced efficiency, accuracy, and service quality.

AUTHOR(S): Brittany Combs

TITLE: The Effect of a Documentary on Parents' Intent to Vaccinate Their Children for HPV

FACULTY SPONSOR: Carla Hermann

EDUCATION LEVEL: Graduate

DISCIPLINE: Nursing, M.S.N.

ABSTRACT: Human Papilloma Virus (HPV) causes millions of deaths yearly, even though there is an effective and safe vaccine available. Even with increasing HPV rates, parents are declining the vaccine for their children at an alarming rate. The purpose of this project was to examine the effect of parents watching a documentary about individuals living and dying with HPV on their intent to vaccinate their children for HPV. Parents knowledge and intent to vaccinate increased as measured by pre- and post-tests. By providing lived experiences of those with HPV, clinicians can increase the intent of parents to vaccinate their children with the HPV vaccine.

AUTHOR(S): Jordan Conard, Jasmine Sabet-LeBlanc

TITLE: Exploring the Use of Tin in Masking Hydroxyl Groups During Organic Synthesis

FACULTY SPONSOR: Enoch Mensah

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: A new method inspired by tin for protecting hydroxyl groups during organic synthesis is being explored. The method relies on the capacity of tin (II) catalyst

to activate 3,4-dihydropyran. This method is mild, versatile, and requires low catalyst loading at room temperature. This new method has been extended to a variety of different alcohols and polyols to form the corresponding protected alcohols in excellent yield.

AUTHOR(S): Rilie Conard

TITLE: Molecular Docking of Quinoline-Based Ligands to Plasmepsin IV Dimer

FACULTY SPONSOR: Victor Waingeh

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: According to UNICEF, malaria resulted in 619,000 deaths in 2021, with 77% of the lives lost being children. Plasmodium falciparum, which is the causative agent for malaria, has aspartic acid proteases known as plasmepsins, which are responsible for degrading human red blood cells from which the plasmodia parasites derive their nutrients for growth. This study uses computational methods to study and evaluate the binding of currently used antimalarial drugs—Quinine, Chloroquine, and Amodiaquine to plasmepsin IV dimer. The results revealed that binding occurred predominantly within the interface between subunits, with binding energies ranging from -7.43 to -9.22 kcal/mol.

AUTHOR(S): Ian Condra

TITLE: The Benefits of Adding Purple Martin Bird Houses to Campus

FACULTY SPONSOR: David Taylor

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: This research proposal seeks to find the benefits of installing Purple Martin (*Progne subis subis*) houses in one of the open spaces around campus. We will discuss why Purple Martins are the desired species for the project, the need for the project, a prospective timeline, and the prospective cost. We will also discuss which areas on campus provide the best habitat for this beautiful acrobatic species.

AUTHOR(S): Kristopher Cooper

TITLE: Hacking the Classroom: A Practical Approach to Computer Security in K-12 Education

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we delve into the security implications of the air gap in computer systems. We demonstrate the significance of this project by illustrating the effects of intensive programs on computer temperature, thereby emphasizing the importance of physical security. This hands-on and easy to integrate into the classroom approach not only aligns with Indiana's educational standards but also provides a practical method for students to understand the correlation between temperature analysis and computer programs. As such, this project can serve as a template for other research work in K-12 contexts, fostering a culture of inquiry and exploration.

AUTHOR(S): Tyler Crecelius

TITLE: War Crimes of the Pacific WW2

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This project will describe the war crimes of both Allied and Axis powers against civilians and soldiers in the Pacific theater of World War Two (WW2).

AUTHOR(S): Shay Cummins

TITLE: Unit Lesson

FACULTY SPONSOR: Sarah Sehlinger

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This project details a unit lesson in a restrictive special education setting.

AUTHOR(S): Olivia DeKold

TITLE: The Progression of Victorian Women

FACULTY SPONSOR: Robert Rennie

EDUCATION LEVEL: Undergraduate

DISCIPLINE: History

ABSTRACT: When looking at the women's rights movement, the Victorian period is often skipped over as a time where women were voiceless creatures merely biding their time until the early 20th century. In reality, the Women's suffrage movement belonged to the Victorians. The Victorian era witnessed a cultural shift concerning the way women were viewed from the beginning of the era to the end; this can be seen in the increase in educational and occupational opportunities for women.

AUTHOR(S): Zachary Denbo

TITLE: Evolution of Propaganda

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: Communication was one of the first things our early ancestors developed to help create means of communication that lead to their survival. As we evolved, our means of communication has followed and started to evolve faster than the ones using it. Propaganda is one of these forms of communication that can lead people to do great acts of kindness or push them into terrible atrocities. From Roman plays to social media posts, let's look at the evolution of Propaganda.

AUTHOR(S): Justin Der

TITLE: Learning Through Robotics: An Exploration of Autonomous Vehicles in the Classroom

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we delve into the transformative domain of autonomous vehicles, with a special focus on their potential as educational tools in K-12 classrooms. Our centerpiece is an Arduino robot equipped with an ultrasonic sensor,

designed to measure the distance to obstacles and apply brakes either automatically or manually. The significance of this research is threefold: it provides a comparative analysis of stopping distances in two distinct scenarios, it aligns with Indiana State standards for technology education, and it creates the opportunity to inspire the next-generation of innovators engaging them with improving safety features in future vehicle designs.

AUTHOR(S): Aiden Dethy

TITLE: Electrochemical Synthesis of Catalytic Nanoparticles

FACULTY SPONSOR: Nidhi Shah, Aaron Setterdahl

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Chemistry

ABSTRACT: Platinum is widely used for its catalytic properties in industries. Electrochemical synthesis of Platinum alloyed with Gold may be an effective and controllable way to synthesize catalytically active nanoparticles. These nanoparticles potentially show a greater catalytic effectiveness while using a lesser amount of precious metals when compared to traditional bulk materials. Previous studies have effectively used chemical methods to synthesize these nanoparticles of interest, however electrochemical methods have the potential to provide better options for fine tuning and control of the size and shape of the nanoparticles.

AUTHOR(S): Gabrielle Dishno

TITLE: Decoding Male Dominance in Animation

FACULTY SPONSOR: Sara Hare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sociology

ABSTRACT: This study examines the gender inconsistencies in the 150 top-grossing animated films in North America from 1991-2022. This study analyzes several variables including speaking roles, male to female ratios, gender of creative staff, and age of the films. We expect to find a large gap in the occurrence of male characters compared to female characters as it relates to various factors. It is important to understand the gender disparity among popular media that is viewed by children as it can shape their views regarding gender biases.

AUTHOR(S): Shelby Dore

TITLE: Gender On and Offscreen: The Effects of Women on Film Production and Movie Success

FACULTY SPONSOR: Sara Hare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sociology

ABSTRACT: This study analyzes the gender disparities on and offscreen among the top-grossing 150 animated films released between 1990 and 2022. The expected results are that films that pass the Bechdel test are more successful than films that do not. It is also expected that women being present in film production has a significant impact on film success and their balance of gender representation. This is important because films with children as the target audience affect child socialization and their understanding of gender roles in our society.

AUTHOR(S): Megan Dotson

TITLE: All About Time

FACULTY SPONSOR: Sarah Sehlinger

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This lesson plan covers five days of material, incorporating a pre-test to gauge initial understanding, daily intervention lessons to build skills, and a post-test to measure learning outcomes. The aim is to create a comprehensive understanding of how to read an analog clock, including hours, minutes, and seconds, as well as applying these skills in real-world contexts.

AUTHOR(S): Lisa Eager

TITLE: Case Work Study of Dyslexia

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: My casework study will go over the methods used from the past to the present to combat dyslexia. Dyslexia is a complex neurological disorder that affects education. This is a disorder that rattles educators, parents, and mostly the person with the disorder. What is the best methodology to combat dyslexia both in the classroom and at home?

AUTHOR(S): Logan Ecken, Trinity Spalding, Lauren McGrath, Cameron Armstrong

TITLE: Salary Expectations in the Data Science Space with the Rise of AI

FACULTY SPONSOR: Ranida Harris

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Business

ABSTRACT: AI is becoming an increasingly popular tool in the workplace as it is easier than ever to use and provides quick access to information. More jobs are being affected by AI and several companies are making changes to accommodate this growth. The key software used in this project were Microsoft's Power BI, Power Query, and Excel. Microsoft Excel was used to store the primary CSV dataset from Kaggle. The data sources for this project were not complex as we found them on Kaggle and general sources on the internet. Additional data was collected from the internet to assist the visuals. We are hoping to find if AI has affected the salary of individuals in data science fields and if students should still pursue a career in this field.

AUTHOR(S): Emilee Edwards, Ali Willan

TITLE: Fading Memories and Sleepless Nights: Exploring the Triad of Age, Sleep, and Memory

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Neuroscience

ABSTRACT: In this study, we are examining the relationship between age, sleep duration, memory, and false memories. Participants are being recruited through social media and word of mouth and will be asked to take an online survey through Qualtrics. Participants will be asked their age, basic demographic questions, and how many hours of sleep they get. The participants will be given four word lists and asked to recall as many words as possible. Data will soon be collected and we will look at the correlation of our variables. This data will provide more information on things that potentially affect memory performance.

AUTHOR(S): Kevin Ekart

TITLE: NoteKeep

FACULTY SPONSOR: John Doyle

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: This project describes a note storage and viewing solution that encrypts notes on the server using a secret phrase and generated key. Once the user tries to access a note, the server will generate a unique key. The generated key is sent to the user via text or email. The encrypted note is then sent to the user's client. The generated key and secret phrase are then used to decrypt the note in the client, keeping the secret phrase and generated key secure as they are not transmitted to or from the server over the network.

AUTHOR(S): Makenzie Emily

TITLE: Evidence of Student Learning

FACULTY SPONSOR: Steffany Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: After completing her ELA student teaching, Makenzie Emily will share her experience in creating an accessible and equitable unit on theme and the data she collected on student learning. This presentation will share some of the practices that worked best in teaching theme to 7th graders, including advanced and lower level students, English Language Learners, and students with IEPs. It will also highlight practical resources for participants.

AUTHOR(S): Garrett Ervin

TITLE: Bridging the Gap: Understanding Robotic Prosthetics through Hands-On Learning

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we introduce a cost-effective, simplified, EMG-controlled robotic prosthetic using Arduino, Myoware, and open-source 3D prints. Immediate benefits include inspiring innovation, curiosity and a deeper understanding of modern prosthetic technology to design better prosthetics. By exploring muscle-generated electrical signals controlling robotic limbs, we have set out to gain insight into robotic prosthetics, biomedical engineering, and assistive technology. We also plan on using this project as a template for further research work using the InMoov project and

similar open-source resources, fostering and driving innovation in the field of prosthetics.

AUTHOR(S): Brinna Erwin, Jenna Watson

TITLE: Juggling Life: The Relationship Between Work-Life Balance and the Mental Health of College and Non-College Students

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: We are investigating the relationship between mental health among college students and non-college students and their academic successes, along with their ability to maintain a balanced work-life dynamic. Participants will be recruited through social media platforms, college networks and referrals from friends and asked to take a survey through Qualtrics. Along with basic questions, participants will be shown questions from the Depression Anxiety Stress Scale (DASS) and Work & Family Conflict Scale (WAFCS). Participants will include 50 female and 50 males. Data will be collected soon. We expect college students to have a more effective work-life balance and mental health issues.

AUTHOR(S): Alexis Evans

TITLE: Role of EGFR in the Proliferation of Human Lung Cancer Cells

FACULTY SPONSOR: Margaret Wallen

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: The EGFR gene directs the formation of epidermal growth factor receptor proteins, which causes rapid cellular reproduction when activated and can lead to cancer. A mutant form of the EGFR gene is being inserted along with a sequence for puromycin resistance into a plasmid for expression in two lines of lung cancer cells. The plasmid will be introduced into the cells using lipofectamine transfection reagent to assess transient expression and cell viability when combined with chemotherapy treatments. Cotreatment with mutant EGFR and chemotherapeutics in cancer cells will ideally aid in understanding the role of this mutation in drug resistant tumors.

AUTHOR(S): Dylan Eversman, Abiy Addis, Louis Wiley

TITLE: River Valley Middle School Parent Resource Program

FACULTY SPONSOR: Ronald Finkbine, Ph.D.

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: We have developed a secondary resource application for parents of students attending River Valley Middle School to use for various utilities. These include access to a school-run bulletin board, a calendar of upcoming events, and a resource for parents to use to easily notify the school when their child will be absent.

AUTHOR(S): Luke Facer

TITLE: Youth Tobacco Usage in Indiana: The Trends, Effects, & Solutions

FACULTY SPONSOR: Ranida Harris

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Business

ABSTRACT: According to the Center for Disease Control and Prevention (CDC), 395,108 middle and high school students in Indiana (ranked 12th in the U.S.) were currently using or had used smokeless tobacco or cigarettes during 1999-2017. This project analyzes the CDC's data using Power Business Intelligence (BI) to identify the causes, trends, and effects regarding the prevalence of this ongoing issue. From the analysis, various solutions are proposed that may ultimately decrease the number of young people who use tobacco or cigarettes in the state of Indiana.

AUTHOR(S): Connor Ferguson

TITLE: Police Technology in a Rural Setting: Does Automated License Plate Recognition Technology Increase Case Clearance Rates?

FACULTY SPONSOR: David Lapsey Jr

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: The current study assesses the effectiveness of automated license plate recognition (ALPR) technology in police investigations. The study uses one-year pre- and one-year post-ALPR implementation calls for service to assess the effects of ALPR technology on clearance rates.

AUTHOR(S): Connor Ferguson

TITLE: The Effects of Open Mindfulness on Anxiety and Depression

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study examines the effects of open mindfulness practice on anxiety and depression. Open mindfulness is defined as being aware of our current mental state using non-judgmental awareness in the present moment. This also includes being aware of one's sensations, thoughts, and consciousness. Examples include such activities as meditation, relaxation, and yoga. It is hypothesized that the use of open mindfulness will be related to lower levels of anxiety and depression.

AUTHOR(S): Madison Flick, Brookelynn Casey, Mariah Woods, Caitlyn Wilder

TITLE: Navigating Anxiety in Pediatric Simulation

FACULTY SPONSOR: Jane Hollowell

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: The influence of anxiety can either enhance or hinder student performance in high-fidelity nursing simulation. To help junior Nursing students develop their confidence, Indiana University Southeast senior Nursing students assist faculty to manage a pediatric simulation that utilizes life-like mannequins, while using day-to-day nursing equipment and supplies. IU Southeast senior nursing students created real life scenarios and generated a script based on common health issues that children face and pediatric nurses encounter in the hospital setting. This poster will include data on how anxiety influences junior nursing student performance during pediatric simulation.

AUTHOR(S): Nick Fow, Michael Haynes, Adam Williams, Ella Grace Kincaid

TITLE: Priceless Vacations at Less Price

FACULTY SPONSOR: Ranida Harris

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Business

ABSTRACT: In an era marked by escalating costs, the affordability of vacations has become a significant concern, contributing to a growing number of Americans foregoing their work-sponsored vacation weeks. This report investigates the potential correlation between the cost of AirBnBs worldwide and the frequency of traveler visits throughout the year to identify destinations where budget-conscious individuals can enjoy vacations without the apprehension of expensive living costs and over-crowded tourist spots. Through analyzation of the least expensive AirBnBs worldwide and comparison with traveler visitation patterns, this study aims to offer valuable insights into cost-effective vacation options for overworked Americans.

AUTHOR(S): Jackson Frisby, Avery Jordan

TITLE: Ranked Retrieval with IMDB Movie Dataset

FACULTY SPONSOR: Chris Kimmer

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: This presentation focuses on creating a ranked information retrieval system for Boolean retrieval of webpages, utilizing an IMDB movie review dataset. The project requires the development of a phrase search engine incorporating a ranked retrieval module, where words must appear side by side. The search engine relies on a serialized inverted index stored in pickled files containing IMDB movie data. This project not only aims to develop a functional ranked retrieval system but also encourages documentation of the development process, addressing any issues encountered during implementation.

AUTHOR(S): David Gaffney

TITLE: Tailoring Silver Growth on ITO Electrodes via Chronocoulometric Deposition for Galvanic Replacement

FACULTY SPONSOR: Nidhi Shah, Aaron Setterdahl

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: We electrodeposited Ag onto bare ITO electrodes using chronocoulometric (CC) technique, varying the charge quantity to control the amount of Ag deposited. The goal is to synthesize Ag rods for subsequent galvanic exchange with other metals. Following electrodeposition, the samples were characterized using scanning electron microscopy (SEM).

AUTHOR(S): Nicholas Gathof

TITLE: Improved Vigenère Cipher

FACULTY SPONSOR: John Doyle

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: This project concerns improving upon the Vigenère by using frequency analysis and compressing with Huffmans Algorithm.

AUTHOR(S): Xondrais Glenn

TITLE: Puppetry and Sustainability: Down by the Falls

FACULTY SPONSOR: Charles Nasby

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This project involves a puppetry performance highlighting the sustainable development goals outlined by the United Nations. The performance will focus on an individual facing issues of poverty (1), hunger (2), clean water and sanitation (6), good health and wellbeing (3), and peace, justice, and strong institutions (16). Though the performance is fictional, it draws on real issues people face and was created from observations made by the performer in New Albany, Indiana.

AUTHOR(S): Xondrais Glenn

TITLE: Destruction, Revolt, and County Profiles

FACULTY SPONSOR: Veronica Medina

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: The project will outline terms like sacrifice zones and leverage points and apply the importance of understanding them in a sociological context with real world examples. This will focus on multiple county profiles around an instance of a sacrifice zone to describe the conditions of a community's physical health, social factors, risks the community faces, and points of resilience more accurately. Both scholarly and non-scholarly credible news related research and data will be used as sources to frame the findings. The project takes inspiration from *Days of Destruction, Days of Revolt* by Chris Hedges and Joe Sacco.

AUTHOR(S): Kelsey Goodwin

TITLE: The Struggle Within: Taboo Obsessions In OCD and Their Relationship to Suicidality, Quality of Life, and Perceptions of Clinicians' Judgment

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: In this study, I am examining taboo obsessions in obsessive-compulsive disorder (OCD) and their relationship to suicidal ideation, quality of life, and perceptions of clinicians' judgment. Participants are being recruited via social media platforms and are asked to complete a survey through Qualtrics. The participants are asked to provide answers to four different scales that will measure subtypes of OCD, quality of life, risk of suicidal ideations, and perceptions of clinician's judgment. I expect to find that as taboo obsessions increase, risk of suicidality and perceptions of clinicians' judgment will increase, while quality of life scores will decrease.

AUTHOR(S): Nathaniel Gray

TITLE: Binding of Plasmeypsin II to Normal and Sickle Hemoglobin

FACULTY SPONSOR: Victor Waingeh

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Chemistry

ABSTRACT: Malaria continues to persist and increase in the modern era with current World Health Organization estimates at 247 million cases with 619,000 deaths in 2021. Therefore, malaria research remains an important focus around the world. The malaria vector, Plasmodium falciparum, has been shown to have a lesser effect on sickle hemoglobin than it does on normal hemoglobin. This study focuses on the binding of plasmepsin II (a hemoglobin degrading agent) to normal and sickle hemoglobin. Docking studies reveal how the structural differences between normal and sickle hemoglobin may contributed to resistance. Important aminoacids, relevant to binding interactions were identified.

AUTHOR(S): Bryce Guidry

TITLE: Leveraging Open-Source Platforms for Zoological Research

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we employ GPS tracking data and Google Earth Pro for data analysis as we explore the fascinating world of wolf behavior. While our current focus is on gray wolves, the methodology that we present can be applied to other species and regions. The project's strength lies in its adaptability and its potential to transform raw data into meaningful insights across various ecological contexts and showcase how open-source platforms can be leveraged for scientific research. Immediate benefits of this project include informing conservation efforts while also allowing data mining beyond conservation, such as urban-planning and disease-control.

AUTHOR(S): Bryce Guidry

TITLE: Hearing the Unseen: A Sound-Tracking Robot for Enhanced Rescue Missions

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research, we aim to build a sound-tracking robot capable of driving towards a sound source. Utilizing two microphones, the robot mimics human binaural hearing, enabling it to determine the direction of the sound. The algorithm design for this function is a key aspect of our work. Immediate benefits of this project include enhancing search and rescue operations, particularly in environments with limited visibility. The robot's ability to locate sound sources can aid in quickly finding survivors trapped under rubble increasing the efficiency and safety of rescue efforts. This research is a promising step towards robot-assisted disaster-response scenarios.

AUTHOR(S): Bryce Guidry

TITLE: Security Issues with Robots

FACULTY SPONSOR: John Doyle

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: The presentation will be a research project that will be going in depth behind the security risks associated with autonomous vehicles. This will include both strengths and vulnerabilities that are present with computerized vehicles such as Tesla.

AUTHOR(S): Tray Haaff

TITLE: AI – A Revolutionary Technological Tool in the Classroom

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: AI has firmly implemented itself into technological advances in recent times, especially within the last five years. But AI in educational settings has gained a poor reputation due to student misuse. My project is set on fixing this narrative. There are so many uses that AI offers people in the education sector—uses that are often overshadowed.

AUTHOR(S): Daniel Hall

TITLE: Mental Health in LGBTQ+ People

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This project will study environmental hardships and their relationship with mental health issues, especially in the LGBTQ+ community. The study will be conducted via an online survey, including participants 18+ years old, recruited through social media. I hypothesize that people who identify as LGBTQ+ will experience significantly more mental health issues and environmental hardships than people who do not identify as LGBTQ+. The results of this study will be important to include and build upon in future research regarding mental health and environmental hardships, as well as improve mental health services and government assistance for LGBTQ+ people.

AUTHOR(S): Machayla Hawkins, Zoey Clemmons

TITLE: You're Not You When You're Tired: Investigating the Link Between Sleep Deficiency, Impulsivity, and Risky Behaviors.

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: We are investigating the potential correlations between sleep deficiency, impulsivity, and risky behaviors. At least 30 participants, aged 18-25, recruited through social media, will respond to a survey including the Barratt Impulsivity Scale, the Sleep Quality Scale, and the Domain-Specific Risk-Taking scale. Data for this research is currently being collected. We seek a deeper understanding of the relationship between sleep, impulsivity, and risk-taking behaviors. We expect to find that as sleep deficiency increases, impulsivity and engagement in risky behaviors increases, and as impulsivity increases, engagement in risky behaviors increases.

AUTHOR(S): Dorian Hendrix

TITLE: The Economic and Health Impacts of Preservative and Organic Foods

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This study will explore what are common food preservatives, what it means to be organic, and how pricing is utilized and manipulated.

AUTHOR(S): Alyssa Hill

TITLE: May the Collage be Ever in Your Favor: Teaching Social Inequality Through Thematic Collages and Tabbing

FACULTY SPONSOR: Steffany Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This presentation will showcase the results of a class activity intended to connect students to the history of *The Crucible*. By imposing strict Puritan laws and setting up a class wide witch hunt mass, the students all experienced the same mass hysteria firsthand that drove Salem to madness. This report, which was partially presented last year at the NCTE conference, will detail the concept, process, and results of my student teaching unit on *The Crucible*.

AUTHOR(S): Natalie Hodge

TITLE: Use of Citizen Science to Study Demographics of Spinner Dolphins in the Egyptian Red Sea

FACULTY SPONSOR: Omar Attum

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: This research gives information on how to identify male from female and adult from juvenile spinner dolphins in the Egyptian Red Sea, Population demographics from different sites in the Red Sea will demonstrate why populations are declining. Birthing rates will be considered in the demographics.

AUTHOR(S): Cassidy Hubbs, Makayla Denton

TITLE: Exploring the Use of Hafnium as Catalyst in Masking Carbonyl Compounds as Acetals and Ketals

FACULTY SPONSOR: Enoch Mensah

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Chemistry

ABSTRACT: A new method inspired by a hafnium catalyst for masking carbonyl compounds as acetals and ketals is being explored. The method relies on the capacity of hafnium catalyst to activate carbonyl groups. This method is mild and requires low catalyst loading in transforming carbonyl groups into their protected analogs as acetals and ketals.

AUTHOR(S): Clay Jackson

TITLE: A Pre-Management Botanical Survey of Rare and Endangered Plants In Southern Indiana

FACULTY SPONSOR: David Taylor

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: Is human land management effective in increasing rare and endangered plants? This is a common question asked in the world of conservation. This question is going to help fuel hopeful lifetime research as it will be answering the question: is human land management effective in increasing rare and endangered plants? However, to answer this question, baseline data is needed. Using prior research done on a property in Harrison County, Indiana, I will be calculating plant density and frequency over a 30-acre block to use as a baseline study to indicate if human management increases rare and endangered plants.

AUTHOR(S): Donovan Jaehnen

TITLE: "Woke" in the Workplace: Diversity Climate, Ethical Culture, and Job Satisfaction

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study examines the relationship between diversity climate, ethical culture, and job satisfaction within organizations. Diversity, equity, and inclusion are topics of interest as they represent a current point of controversy. Diversity climate relates to how inclusive organizations are of different perspectives and adopting progressive values. Fostering socially acceptable, ethical culture in the workplace has been shown to favorably impact the effectiveness of an organization. Therefore, the researcher hypothesizes ethical culture will positively correlate with diversity climate, diversity climate will positively correlate with job satisfaction, and ethical climate will positively correlate with job satisfaction.

AUTHOR(S): Erin Jenkins

TITLE: Relationship Between Mental Health, Relationship Satisfaction, and College Status

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Past research has shown that attending college can have negative effects on mental health, and that negative mental health can have effects on relationship satisfaction. The present study examines whether college status has a significant effect on both mental health status and relationship satisfaction. Results will show that college students' mental health and relationship satisfaction will have a greater correlation than that of non-college students. This shows that there is a noticeable difference in the mental health and subsequent relationship satisfaction in college students versus non-college students, meaning college status does in fact make a difference in these two variables.

AUTHOR(S): Bryan Johnson

TITLE: It Ain't Me: An Exploration of Counterculture Revolution Protest Music

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: History

ABSTRACT: “The times, they are a-changin’,” Bob Dylan’s famous statement from his 1964 song of the same name, was very fitting as American society was standing on the precipice that would transform the landscape of the country. If the 1960’s could be summed up in one word it would be change—from the Civil Rights Movement to JFK’s assassination and finally the hippies of the Counterculture Revolution and the Vietnam War. One lasting legacy of this era is the music that we know today as the first generation of classic rock. Working in tandem with the anti-war movements, “protest” anthems helped define an era of our history. Using peer-reviewed scholarly journal articles and looking at the issues that influenced the lyrics, this study will examine what defines a protest song, explore how they were used, and analyze the lasting impact that they have on today’s world.

AUTHOR(S): Helen Johnston

TITLE: Appreciating Nature and Childhood Development

FACULTY SPONSOR: Brittany Ann Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Neuroscience

ABSTRACT: To wrap up my Neuroscience degree at IUS, I spent 160 hours interning at The Louisville Nature Center (LNC) from December 2023 to April 2024. LNC drew me in with their commitment to educating the community of the natural world. Their goal is to spread appreciation of native flora and fauna and advocate environmentalism. My time was divided between their Swallowtail Forest School, forest restoration, and outreach. My time in the forest school was spent encouraging kids ages 3-5 to gain independence through outdoor education. In forest restoration, I planted native species to the preserve while clearing out invasive species

AUTHOR(S): Hannah Jones

TITLE: Making Connections in Mathematics: Integrating Social Emotional Learning into STEM

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This research paper is about the connections between science, technology, engineering, and mathematics (STEM) teachers and their students using social emotional learning. After reviewing related resources on social emotional learning (SEL) in specifically mathematics classrooms. The research conducted is from high school in southern Indiana and shows the teachers’ perspectives on SEL and how their students perform in the classroom.

AUTHOR(S): Keziah Jones

TITLE: Supplemental Instruction for Third-Year Nursing Students: Improving Outcomes Through Evidence-Based Methods

FACULTY SPONSOR: Jennifer Teater

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Research indicates the incorporation of student-centered teaching strategies, including supplemental instruction, can enhance academic achievement in

nursing students (Cho et al., 2023). The goal of this project, completed by an IU Southeast senior Nursing student, is to enhance learning and retention of course material by providing evidence-based supplemental instruction in the “H361: Alterations in Health II” course. Various methods are incorporated, including quizzing, NCLEX-style practice questions, and more. Utilizing scholarly sources and the results of a pre- and post-survey administered to student participants in the SI sessions, this poster summarizes the effectiveness of supplemental instruction to enhance learning.

AUTHOR(S): Kolby Jones, Fiona Vonderheide

TITLE: Words that Bind: Investigating Family Communication Patterns and Relationship Satisfaction

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: We are conducting a study to determine an association between relationship satisfaction and family communication patterns. Past research shows evidence of the importance of healthy communication skills increasing the level of satisfaction in relationships. We are using the Family Communication Patterns Measurement and the Relationship Assessment Scale. Our survey will be administered through social media to individuals aged above 18. If our hypotheses are supported, the results will show a positive correlation between conversation orientation and relationship satisfaction, a negative correlation between conformity orientation and relationship satisfaction, and conversation orientation being highly correlated with women’s relationship satisfaction compared to men’s.

AUTHOR(S): Casey Jordan

TITLE: Donation Drive for a Difference

FACULTY SPONSOR: Janice McMahan

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Across the US, there has been a 120% increase in emergency room visits for the homeless population over the past 11 years (CDC, 2023). To assess the needs of the homeless population in an acute care hospital setting, an IUS senior Nursing student surveyed and interviewed social workers and nursing staff healthcare personnel in an urban hospital, to determine one need that can be met with an annual donation drive. This poster will present the assessment, creation, and outcome of the donation drive.

AUTHOR(S): Allison Justice

TITLE: The Social Effects of the Irish Potato Famine

FACULTY SPONSOR: Robert Rennie

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sociology

ABSTRACT: Two million people lost their lives in Ireland from 1845-50 due to the Irish Potato Famine. While it was a natural disaster and caused a massive physical loss of lives, it was also fueled by social factors. To better understand this, I will look at Ireland before and during the famine to see why these circumstances aligned to create such a

fatal outcome for the people of Ireland. Some topics that will be covered are class status, social status, food entitlement and the geographical location of Ireland.

AUTHOR(S): Madison Kays

TITLE: Veiled in Sorrow: The Influence of Victorian Mourning on Culture

FACULTY SPONSOR: Robert Rennie

EDUCATION LEVEL: Undergraduate

DISCIPLINE: History

ABSTRACT: The Victorian era is known for its eclectic and unique mourning rituals. The aspects of mourning throughout this era had origins in the mourning of Queen Victoria after the death of her husband. However, it is the ways in which this mourning affected Victorian society that are significant. The power that mourning had on the culture of the Victorian era will be expanded upon. This presentation will look into how mourning influenced the use of photography, correlated with the rise of Spiritualism, and altered Victorian fashion. Ultimately, the constructs of Victorian mourning influenced the culture of the era.

AUTHOR(S): Kevin Keck

TITLE: On the Topic of Gender in Comedy

FACULTY SPONSOR: Leigh Viner

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Philosophy

ABSTRACT: My research presentation will give a brief overview of the history of the use of gender in stand-up comedy, analyze how the use of gender in comedy has evolved over time, argue why women are indeed funny, and conclude that the use of gender topics in stand-up comedy should be explored and celebrated, not dismissed and cancelled.

AUTHOR(S): Courtney Kessinger, Alyssa Pumphrey, Sophia Mains, Brenna Henderson, Jilly Clan, Adameeyon Burton

TITLE: Dunkin' Promotional Campaign Research Project

FACULTY SPONSOR: Yunmi Choi

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Journalism & Media

ABSTRACT: Through secondary, quantitative, and qualitative research, we will analyze and demonstrate the promotional campaigns that Dunkin' should execute for future promotional activities geared towards college students in New Albany, Indiana.

AUTHOR(S): Johnathon Kimmick

TITLE: Bounding Beyond the Language Barrier

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This project will explore the researcher's time as a Basic Skills teacher during their residency. The main concept covered is how/if an English speaking teacher learning Spanish is different than a teacher not learning Spanish while working with kids who speak Spanish and are learning English.

AUTHOR(S): Hailey Klink

TITLE: Analyzing the Relationship Between Substance Use, Depression, and PTSD

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study will analyze the relationship between substance use, depression, and PTSD using correlational data analysis. This study holds relevance for professionals treating the comorbid diagnosis of either depression and substance use or PTSD and substance use and provides significant information to individuals seeking treatment for either comorbid diagnosis. It is hypothesized that there will be a positive significant correlation between substance use and PTSD and substance use and depression.

AUTHOR(S): Emily Kratz

TITLE: Nanotechnology: The Future of Treating Glaucoma

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: Glaucoma has been identified as the second leading cause of blindness by the World Health Organization. It is a chronic, irreversible eye disorder that typically exhibits no early symptoms. Current forms of glaucoma treatment can cause further eye damage or have difficulty reaching target areas. To combat this, nanotechnology-based treatments are being developed as alternatives. Particles one-billionth the size of a meter are designed to carry medication through the delicate layers of the eye. This research compiles information from scholarly articles on how nanoparticles work in living organisms and how they can change the future of glaucoma treatment.

AUTHOR(S): Madeline Lanham

TITLE: Net Health UI: Proposing Changes for Better Efficiency and Engagement

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we started by examining the user interface (UI) of Net Health, a platform widely used in various therapy settings to identify identifies key areas for improvement in the UI. These include issues such as overcrowding, poor navigation, and a lack of user-friendliness. We then worked on several enhancements, such as adjusting text size for readability, reorganizing the layout for efficiency, and injecting elements of fun to boost therapist engagement. Immediate benefits of this project include a more user-friendly and efficient therapy platform, leading to increased productivity, reduced financial loss, and improved patient care.

AUTHOR(S): Amanda Lay

TITLE: Perceived Parenting Styles in Childhood Impacts on Adult Attachment

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Adult attachment styles influence one's quality of life and relationships. This study aims to further examine the effects of perceived parenting styles in childhood on adult attachment styles. Past research found a predictive relationship between parenting style and adult attachment. In this study, the collected data will be analyzed to test (hypothesis 1) if individuals with an authoritative style in childhood will be more likely to have secure attachment in adulthood than those with other parenting styles and (hypothesis 2) authoritarian and permissive parenting styles will be more likely to have anxious or avoidant attachment styles.

AUTHOR(S): Blade Lazrovitch

TITLE: What's the Hold Up?

FACULTY SPONSOR: Taryn Petrash-Hall

EDUCATION LEVEL: Undergraduate

DISCIPLINE: English

ABSTRACT: While walking to class with my friend, she mentioned that she'd never been to the Writing Center. When I asked her why, she said that she was intimidated. After our talk, I wondered if other students at IUS felt the same way. There are many students at IUS who have never used the Writing Center. This research will determine the main reasons why students at IUS haven't used the Writing Center and present solutions to help bring more students to the Writing Center.

AUTHOR(S): Jesse Ledgerwood

TITLE: Police Officers' Perception of Technology: Officer Usage and Support for Automated License Plate Recognition Technology

FACULTY SPONSOR: Lapsey

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Criminology and Criminal Justice

ABSTRACT: In the current study, we survey police officers (n = 71) from Elizabethtown, Kentucky. Our survey included questions about their perception of automated license plate recognition (ALPR) technology, specifically regarding its effectiveness, benefits, and challenges. Our research offers a unique understanding of how ALPR technology is adopted and perceived in a smaller city in rural context. Overall, the project expands existing literature on ALPR technology and provides practical insight for police and policy makers.

AUTHOR(S): Kawehilani Leffler

TITLE: Using Differentiation with *Number the Stars*

FACULTY SPONSOR: Stefanny Comfort Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: Differentiation strategies to evaluate lower and higher level learning. This presentation demonstrates examples of essays, assessments, projects, and field trips pertaining to Lois Lowry's *Number the Stars*. Through connecting the novel to its historical context, students engage in higher level learning with the text.

AUTHOR(S): Rylee Leis

TITLE: Postpartum Depression and Potential Factors

FACULTY SPONSOR: Brittany A. Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Past research has shown that many women have symptoms of postpartum depression. The research I have examined has shown that there are many different variables that can play a part in one's postpartum depression. In my present study I will examine if relationship status and the number of biological children already had by the participant affects their postpartum depression score. I hypothesize that my results will show an increase of scoring on postpartum depression within women who stated that they have already birthed a child and an increase in woman who stated that they weren't in a relationship during birth.

AUTHOR(S): Taylor Lockhart

TITLE: Mass Hysteria in the Classroom: Using *The Crucible* to Build Connections to Reading

FACULTY SPONSOR: Steffany Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This presentation will showcase the results of a class activity intended to connect students to the history of *The Crucible*. By imposing strict Puritan laws and setting up a class-wide witch hunt mass, the students all experienced the same mass hysteria firsthand that drove Salem to madness. This report, which was partially presented last year at the NCTE conference, will detail the concept, process, and results of my student teaching unit on *The Crucible*.

AUTHOR(S): Alexandra Maher

TITLE: Pride Goeth Before the Fall

FACULTY SPONSOR: Steffany Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: I will be presenting on a poetry unit that I taught at Charlestown High School as a student teacher. This was an AP Literature class that looked at four advanced poems with one common theme; I will include the results and evidence of learning that came from using the teaching method of Socratic seminar and the lesson plans I created.

AUTHOR(S): Kamari Marsh

TITLE: Scrolling Through Mental Health Issues, the Relationship Between Social Media Use and Mental Health

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: For this study, I am looking at the relationship between social media use in young adults and depression, anxiety, and self-esteem levels. The participants will be ages 18 and up, recruited through social media and Canvas messages. Data will be collected through a Qualtrics survey that asks about weekly social media use as well as depression, anxiety, and self-esteem levels. Data will be collected shortly to either

support or not support the hypothesis that when social media use increases, depression and anxiety levels increase. Also, I predict that when social media use increases, self-esteem levels decrease.

AUTHOR(S): Nathan Massie, Ethan Bilyk, Jamal Mahdi

TITLE: American Print-House Museum App

FACULTY SPONSOR: Ronald Finkbine

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: This presentation will showcase an app for a museum being built by the American Print-House for the Blind

AUTHOR(S): Alicia McCart

TITLE: Empowering Balance: The Function of the Self-Determination Theory in Relation to Workplace Wellbeing

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE:

ABSTRACT: What aspect of the workplace is most overlooked? Some may suggest money or leadership roles. However, many underestimate the importance of employee mental health as a factor in workplace satisfaction. This research will examine employees' mental well-being and what creates the greatest amount of satisfaction throughout the workplace. Understanding the foundation of what stimulates employees' well-being is crucial for workplace success. This study takes a closer look at the basis of mental health in the workplace through the perspective of the self-determination theory in conjunction with selected scholarly research, employee interviews, and original surveys conducted across various workplaces.

AUTHOR(S): Mack McCutcheon

TITLE: Terror in the Night: The Correlation Between Sleep Paralysis, Quality of Sleep, Associated Fear and Hallucinations

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: My study explores the cyclical relationship between sleep paralysis, sleep quality, and the intensity of fear associated with hallucinations. Sleep paralysis is characterized by a temporary inability to move the body upon awakening, with intact ocular abilities, often accompanied by distressing hallucinations. Focusing on individuals who have experienced sleep paralysis once in their lifetime, my research employs surveys and qualitative assessments to investigate these variables and their interplay, which may potentially worsen the condition. My findings aim to highlight the physiological and psychological factors of sleep paralysis, offering new insights for the disorder. The data will be collected shortly.

AUTHOR(S): Kaylyn McGehee, Kei R

TITLE: Research Project on Advanced Data Security Techniques

FACULTY SPONSOR: John F. Doyle

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: This project details privacy-preserving data sharing protocols for our final project in CSCI-B439. We will be researching the different techniques for sharing sensitive information while protecting user privacy. Specifically, we plan to investigate homomorphic encryption, secure hashing, and differential privacy. Our project will involve explaining how each protocol works, demonstrating its implementation using various visual aids such as UML diagrams, flowcharts, diagrams explaining the processes involved, and even graphical representations of data transformations, and comparing/contrasting the techniques. Additionally, we intend to cover the topic of public key encryption.

AUTHOR(S): Mallory McGlothlin

TITLE: Boomers to Zoomers: Social Media Among Older Generations

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: Since the COVID-19 pandemic, there has been about a twenty percent increase in social media usage worldwide. While social media is often associated with anxiety and depression, for older generations it can create social connection. Through a review of selected scholarly articles, statistical analysis of social media usage, and an original survey, this project will investigate if older adults interact with and perceive social media differently than they did before the pandemic. Through these findings, society can find ways to virtually connect with older adults, thus improving their social ties and mental health.

AUTHOR(S): Riley Meade, Brenley Berger, Morgan O'Daniel, Stephanie Bishoff

TITLE: Health Promotion for Charleston, West Virginia's Underserved Population

FACULTY SPONSOR: Julia Mattingly

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Indiana University Southeast senior Nursing students will describe work completed in community/public health nursing practicum, including a population health analysis and various health promotion efforts for the underserved population of Charleston, West Virginia. This poster will include community assessment data, literature review results, and subsequent care provided via volunteer work with Remote Area Medical (RAM). Aligning with RAM's mission statement, our volunteer efforts in triage, medical, dental, and vision areas contributed to the quality care of 315 patients from this underserved area of Appalachia.

AUTHOR(S): Michael Melchor

TITLE: Understanding Security Vulnerabilities: Evaluating Password Security

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Graduate

DISCIPLINE: Interdisciplinary Studies, M.I.S.

ABSTRACT: In this research, we explore password security and how easily passwords can be hacked. The project aims to highlight the importance of strong passwords in the

context of cybersecurity, and the potential vulnerabilities that weak passwords can introduce. We have designed the instruments to guess passwords, providing a hands-on approach to understanding the intricacies of password security. Immediate benefits of this project include raising awareness about the importance of password strength and providing practical insights into the process of password cracking. This project can be used as a template for analyzing types of cyber threats and developing effective countermeasures.

AUTHOR(S): Ava Minnery

TITLE: Gender Representation On- and Off-Screen in Children's Animated Films

FACULTY SPONSOR: Sara Hare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sociology

ABSTRACT: This study analyzes the representation of male and female characters in the 150 top-grossing animated children's films released between 1990 and 2022.

Results show that male characters have many more lead roles and speaking roles on average than female characters, while female characters are often portrayed as stereotypes. The study also examines how the presence of female creative staff affects the quantity and quality of female characters on-screen. The representation of gender in animated media is vital because it can have a great impact on children and their views of gender in the real world.

AUTHOR(S): Isaac Minton, Alena McMillan

TITLE: Digitization, Curation, and Research on Fauna of Indiana

FACULTY SPONSOR: Suparna Mukhopadhyay

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: Several surveys were conducted on freshwater vertebrates in the Blue River and its tributaries by students at IU Southeast under the supervision of faculty members between 1973-1997. These collections are being curated, cataloged, digitized, and researched in collaboration with IU collections at Bloomington for public outreach. Certain species are being studied for their current distribution pattern and to determine why their populations are now endangered or extinct in their native habitats. A species of particular interest in our research is the Eastern Hellbender (*Cryptobranchus alleganiensis alleganiensis*) which is currently an endangered species in Indiana, Illinois, Ohio, and Maryland.

AUTHOR(S): Isaac Minton

TITLE: Raising Personal Classroom Pets and its Influence on the Educator

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: In this expansion research project, the concept of having a classroom pet was extended to the interactions students have with the educator before they come into the classroom. Raising your very own pet for classroom use involves more work than just a typical at home pet. The purpose of this study is to see how the process of selecting and raising a personal classroom pet impacts the educator's beliefs towards

the conceptual ability of the pet. Six different enclosures, all with varying species, were chosen based on traits that would present themselves beneficial towards a students' education.

AUTHOR(S): Reagan Mock, Paige Davis

TITLE: Depressive Symptoms, Sleep Quality, and Social Activity in College Students

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: The present study examines the relationships between depressive symptoms, sleep quality, and social activity in college students. Data will be collected through an online survey consisting of three questionnaires. We predict results will show that women participants and participants who work more hours per week will tend to have more depressive symptoms and poorer sleep quality. We also predict results will show that participants who engage in more social activity will tend to have fewer depressive symptoms and poorer sleep quality.

AUTHOR(S): Addison Morrison

TITLE: Enhancing Student Well-Being: The Impact of Social-Emotional Learning Programs in Secondary Schools Description

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This case study focuses on the positive effects of Social-Emotional Learning (SEL) programs implemented in secondary schools. It explores how these initiatives boost students' social skills, emotional intelligence, and overall well-being. The study aims to emphasize the significance of holistic education in nurturing students' personal development and academic success.

AUTHOR(S): Hanna Mudd

TITLE: Anonymous, Immortal Martyrs: Germany's First Gay Liberation Movement, 1890-1933

FACULTY SPONSOR: Robert Rennie

EDUCATION LEVEL: Undergraduate

DISCIPLINE: History

ABSTRACT: This paper focuses on the socio-political climate in the German Empire and the Weimar Republic during the first gay liberation movement in modern European history. This movement spanned from the late nineteenth century following the adoption of Paragraph 175 – an 1871 statute in Germany's criminal codes that criminalized sex between men – and lasted until the appointment of Hitler as chancellor in 1933. The research paper found that an increase in urbanization and liberalism, Germany's lenient censorship laws, and the common goal of repealing Paragraph 175 contributed to the social conditions that catalyzed Germany's Gay Liberation Movement.

AUTHOR(S): Anna Mullen

TITLE: Intelligence Perception of Different Species and Pest Determination

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Past research has investigated how humans perceive the intelligence of different species and how that perception influences human behavior. However, little research has been carried out on how the perceived intelligence of an animal may influence the determination of it being a pest. This project aims to examine the perception of intelligence of two different animal species and how that perception correlates with pest determination. It is hypothesized that there will be a correlation between perceived intelligence of an animal and pest determination. The secondary hypothesis is that there will be a correlation between religion and pest determination.

AUTHOR(S): Audrey Munford

TITLE: Integers

FACULTY SPONSOR: Sarah Sehlinger

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: My presentation will focus on the impact of a five-day unit in math of students with disabilities in 8th grade. I will analyze the data from a pre-assessment to help make instructional decisions then look for student growth by reviewing the results of a summative assessment. Lessons will contain a variety of evidence-based practices aimed to improve the students understanding of integers.

AUTHOR(S): Adrienne Nalley, Nora Dana

TITLE: An Investigation of DoobyDoo, an Isolated Bacteriophage's Genome Sequence and Functions

FACULTY SPONSOR: Elizabeth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: A bacteriophage was isolated from a soil sample that was collected from a flower garden on September 11, 2023. Once isolated, DoobyDoo's DNA was sequenced and auto-annotated through several computer algorithms. They were followed up by being manually annotated, and bioinformatics were performed on the genomic DNA sequence of DoobyDoo to determine gene location and predict gene functions. Guidance was provided through databases with known phage sequences, providing insights into our phage. Our research provided information about the genes in the bacteriophage. We determined how many genes are present and their roles. This research provides insight into relationships of bacteriophages.

AUTHOR(S): Zachary Nelson, Dylan Eversman

TITLE: Securing End-to-End Messaging with Encryption

FACULTY SPONSOR: John Doyle

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: This project focuses on demonstrating cyber security techniques and practices such as encryption, firewall configuration, traffic monitoring and other network hardening.

AUTHOR(S): Zachary Nelson, Brandon Mora, Ryan Hurst

TITLE: CSGrader

FACULTY SPONSOR: Ronald Finkbine

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: This project will describe the Project Grader, which accepts coding assignments from students in several languages, and returns graded assignments to professors, faculty, and other stakeholders.

AUTHOR(S): Zachary Neudorff

TITLE: Using AI to Create an Engaging Classroom

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: AI has become a talking point within the world of education. While AI tools such as the likes of Chatgpt and others have raised concerns when it comes to academic integrity, AI can be used to help and guide students on various topics within science and mathematics and can be used to create a more engaging classroom for students and teachers.

AUTHOR(S): Madison Olander, Srey Lim, Jacob Rose

TITLE: Sequencing and the Genome Annotation of DoobyDoo

FACULTY SPONSOR: Beth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: DoobyDoo, a bacteriophage discovered as part of the The SEA-PHAGES program using the host bacteria *Gordonia rubripertincta*, had its genome annotated using bioinformatic programs. To annotate, each feature was decided to be a gene or not, what the start site is, and what the function of the gene is. After genome annotation, we can conclude that this is a new bacteriophage. It is thought that bacteriophages are the most common biological entity on the planet. Completing annotations will provide a better understanding to these biological entities. These phages can be used in research to combat antibiotic resistance.

AUTHOR(S): Mya Ong

TITLE: The Lopsided Misrepresentation of Females in Animated Film

FACULTY SPONSOR: Sara Hare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sociology

ABSTRACT: This study examines the disparities between the way gender is represented as well as the underrepresentation of females as shown in the top 150 grossing animated films released from 1990 through 2022. We focused on male characters outnumbering female characters as leads and in speaking roles, parental roles, and rescues in animated films. The results are expected to display a large gap in the amount of male versus female characters. The most avid viewers of this popular media are children, who absorb the messages about gender roles in these animated films which mold their identity and sense of self.

AUTHOR(S): Trennt Overstreet

TITLE: Sustainable Management of Campus Grounds to Mitigate Factors Leading to Colony Collapse Disorder

FACULTY SPONSOR: David Taylor

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: Colony Collapse Disorder (CCD) is a perplexing occurrence where, seemingly out of nowhere, the worker bees in a honeybee hive up and disappear. Several factors have linked to CCD however that can be linked to the occurrence of CCD and are believed to exacerbate the issue. The likely most influential factor leading to CCD is the use of neonicotinoid pesticides. Additional stress factors such as nutritional stress and habitat loss affect the prevalence of CCD as well. All these factors must be investigated further to ascertain possible risk factors on the IUS campus related to CCD and how to combat them.

AUTHOR(S): Preston Penny, Ibrahim Abdulrehman

TITLE: Genomic Annotation Research of Bacteriophage DoobyDoo

FACULTY SPONSOR: Beth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: SEA-PHAGES is a two-semester research program in which students conduct research on novel bacteriophages—viruses that exclusively target and kill bacterial hosts. Recently, bacteriophage research has become increasingly critical as bacteriophages can destroy multi-drug-resistant bacteria. During the BIOL L-101 semester of SEA-PHAGES, undergraduates Preston Penny and Ibrahim Abdulrehman isolated and purified the mycobacteriophage DoobyDoo. Now, their research is dedicated to annotating DoobyDoo's genome. Utilizing bioinformatic databases and computer algorithms, the students have helped identify and annotate DoobyDoo's genes and their potential functions. The student's conclusions can assist researchers in comprehending the nature of DoobyDoo and its relationship to other bacteriophages.

AUTHOR(S): Abigail Perdue

TITLE: Improving Students' Abilities to Solve Word Problems Through Five-Day Intervention

FACULTY SPONSOR: Sarah Sehlinger

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: My presentation will focus on the impact of a five-day word problem unit on elementary students with disabilities. After administering a preassessment, I will analyze the information it provides to inform my instructional practices in the unit. The lessons will contain evidence-based best practices aimed to improve the reading and solving of word problems. I will utilize a summative assessment to determine student growth following the unit.

AUTHOR(S): Alyssa Perkins

TITLE: Developmental Milestones from Ages 2-30 Months

FACULTY SPONSOR: Teresa Stengel

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: It is important for nurses to understand early childhood development to identify age-related milestones, provide proper care and anticipatory guidance to parents and caregivers. An IUS senior Nursing student provided supplemental teaching to junior nursing students about developmental milestones for children aged 2-30 months old. A handout describing the social, communication, cognitive, and physical milestones for a child ages 2- 30 months was given to junior nursing students. A pre- and post-test was used to measure retention of knowledge. This poster presents the supplemental instruction offered to students and associated findings from education provided.

AUTHOR(S): Kaylyn Peters

TITLE: The Use of Psychedelics in History and Modern Medicine

FACULTY SPONSOR: James E. Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: Psychedelics have been highly regarded in ancient cultures for their ability to induce altered states of consciousness. They were incorporated into food for ritual, spiritual, and medicinal purposes and symbolized the connection with the divine or nature. These practices, deeply rooted in cultural beliefs and shamanic traditions, highlighted a holistic approach to well-being. Despite the changing regulations, delving into the historical use of psychedelics provides valuable insights into humanity's long-standing quest for meaning and connection with the universe.

AUTHOR(S): Bailey Phipps, Katie Durbin

TITLE: Determining DoobyDoo's Gene Functions

FACULTY SPONSOR: Beth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: We are working on the DoobyDoo bacteriophage genome, identifying genes and their functions. Isolated from a soil sample by students during Fall 2023, DoobyDoo infects bacteria and replicates inside of it causing the bacteria to swell and burst. By comparing DNA master data with other sequence analysis programs, we recognize gene functions. Understanding these functions informs us how the phage impacts its host. Our findings will contribute to publishing the genome sequence.

AUTHOR(S): Kristin Porter

TITLE: A Multimedia Approach to Teaching *Night* by Elie Wiesel

FACULTY SPONSOR: Stephanie Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Teaching/ T2T

ABSTRACT: In this presentation, I will be discussing the importance of integrating different methods of technology into the study of classic literature. I will be focusing on teaching a unit over topics related to the Holocaust and anti-semitism. The strategies and methods featured are backed by personal research and experience.

AUTHOR(S): Jackson Price, Nathaly Angeles

TITLE: Annotation of the Genome of the Novel Phage DoobyDoo

FACULTY SPONSOR: Elizabeth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Neuroscience

ABSTRACT: In the Biology L102 Lab, we annotated the genome of the novel bacteriophage (a virus that infects bacterial cells) DoobyDoo as part of the SEA-PHAGES program. DoobyDoo specifically infects the bacteria *Gordonia rubripertincta*, a common bacteria in soil. Using various computer programs built to aid in genetics research, we were able to identify individual genes within DoobyDoo's genome and identify many of their functions. This work will add to the ever-expanding SEA-PHAGES database of phages worldwide. Research in phage genomics can help in the promising field of phage therapy and understanding the evolutionary relationships of bacteriophages as a whole.

AUTHOR(S): Michelle Priester

TITLE: Harmonizing Emotions: A Genre Exploration of Music's Impact

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study aims to explore how different types of music influence the mood and feelings of listeners and how individual and situational factors moderate music-induced emotions. The study reviews two major theoretical perspectives on how music affects emotions: the cognitive appraisal theory and the emotion induction theory. The study also discusses some of the factors that influence emotional responses to music, such as musical features, listener characteristics, and contextual variables, and some of the methods and measures that are used to assess music-induced emotions. The study examines some of the effects of music on stress and well-being of an individual

AUTHOR(S): McKenzie Purkhiser

TITLE: Social and Emotional Learning in Schools

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: Social and emotional learning (SEL) is a process used in school corporations to address the need for students to become more self aware, able to set reasonable and appropriate goals, practice empathy, and to aid in decision-making skills. The topic of the research will consist of SEL and its effects on student outcomes, interpersonal skills, and emotional intelligence in a school setting. The research will also dive into implementations and limitations regarding processes in schools, and specific challenges related to SEL and school-wide implementation. Evidence will be used to support claims, as well as case studies from various sources.

AUTHOR(S): Heather Purlee

TITLE: Behind the Curtain: How Society Affects the Life of a Dancer

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Business

ABSTRACT: This presentation covers different time periods, their beliefs, and how these affect how dancers are perceived as well as the clothing and costumes they wear.

AUTHOR(S): Grant Qualkenbush

TITLE: How Music Impacts Emotions, Thoughts, and Experiences

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Geosciences

ABSTRACT: This project looks at certain brain functions that are active while listening to music with and combines this with qualitative data results on the effectiveness of music in an average person's day to day activities.

AUTHOR(S): Bailey Ramer

TITLE: Making Identity Visible in and Through Reading

FACULTY SPONSOR: Steffany Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: Beginning my experience in student teaching, I found myself face-to-face with students who were struggling with identifying who they personally were. This was something I immediately knew needed to change. By making this my top priority, I discovered that the characters came to life for the students. Through a variety of assessments, assignments, and discussions the students were able to slowly bring the plot and characters into focus, thus making the reading more visible. The students cannot truly meet and understand new characters until they truly meet and understand themselves. Teachers can be the key to this connection.

AUTHOR(S): Jorden Render, Emily Perez

TITLE: Levels of ADHD Symptoms and Risky Decision-Making

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: For our study, we are looking at Attention-Deficit/Hyperactivity Disorder (ADHD) symptoms and how they may link to decision making tendencies. ADHD is a common disorder individuals experience symptoms of, and the area of consequences are still developing in research. Our study plans to investigating how symptoms may link to decision-making tendencies in three different areas. For our hypotheses, we predict that those with higher amounts of ADHD symptoms will report higher engagement in risky decision-making tendencies. Those with higher amounts of ADHD symptoms will report higher engagement in risky decision-making.

AUTHOR(S): Kelsea Richmer

TITLE: Mutant KRAS and Effects of Chemotherapeutics in Human Lung Cancer

FACULTY SPONSOR: Margaret Wallen

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: A point mutation in GTPase KRAS is a known genetic driver of lung cancers. The current research aims to transform bacterial cells with a plasmid containing mutated KRAS and Hygromycin resistance cassette to be introduced into human lung cancer lines H1299 and A549 to ultimately produce stable expression of KRAS. PCR was used to amplify KRAS for cloning into hygromycin resistance cassette containing plasmid using restriction enzymes NheI and NotI. T4 DNA Ligase constructed plasmids then transformed into bacterial cells. Lipofectamine transfection agent introduced plasmids to H1299 and A549. Transient gene expression was confirmed by PCR, qPCR, and Western Blot.

AUTHOR(S): Jacob Riggs, Elizabeth Mittel, Nicholas Gathof

TITLE: No Kill Inventory System

FACULTY SPONSOR: John Doyle

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Computer Science

ABSTRACT: No Kill Louisville, an animal shelter and pet food bank, is in need of a system to track their inventory of pet food. This is a system where they can enter the different types of food, edit the current values, and view the total inventory when they need.

AUTHOR(S): Dylan Robbins

TITLE: Biomimicry in Robotics: Building a Quadruped Robot

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we have built a quadruped robot inspired by the locomotion of quadruped animals. Our design features two joints per leg: a hip joint for forward and backward rotation, and a knee joint for vertical movement. This approach to design has helped us explore the potential of legged robots in navigating uneven terrains, where wheels may fail. We also investigate the robot's gait and stability, considering the location of the robot's center of mass. The immediate benefits of our project extend beyond experimentation, potentially contributing to fields like disaster response, exploration, and industrial inspection.

AUTHOR(S): Tamiya Robinson

TITLE: Adolescent Substance Use: Unraveling the Relationship with Aggression and Friendship Dynamics

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Neuroscience

ABSTRACT: My study explores how adolescent substance use links to aggression and friendship dynamics. Unraveling this connection is vital for targeted interventions to enhance understanding, aiming to mitigate risky behaviors and foster positive relationships among adolescents. The hypotheses suggest a positive correlation between adolescent increase substance use and aggression, and a negative correlation between substance use and quality of friendships.

AUTHOR(S): Cassandra Roman

TITLE: The Mental Health of College Athletes: The Role of Academic Anxiety & Sleep Quality

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Through this research, the importance of maintaining & acknowledging the mental wellbeing of collegiate athletes will be enhanced across the campuses holding athletic teams within their institution. The research will include self-reported responses, each measuring the academic anxieties felt, the quality of sleep obtained, and the mental wellbeing of athletes. I predict that the better the sleep quality an athlete has, the better their mental well-being will be. Meanwhile, the less academic anxiety an athlete has, the better their mental well-being will be. Overall, academic anxiety will have more of an impact on the well-being of college athletes.

AUTHOR(S): Andrew Roy

TITLE: Autosomal Dominant Dandy-Walker Malformation with Occipital Encephalocele: A Brief Overview and Exploration of Implications

FACULTY SPONSOR: Michele Zimmerman

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: Autosomal Dominant Dandy-Walker Malformation with Occipital Encephalocele (ADDWOC), is a potentially fatal and extremely rare neurodevelopmental anomaly, with only thirty-three reported cases since 1887. It has been implicated that this malformation is associated with a genetic mutation that causes improper formation of the brain and surrounding tissues. By examining scientific literary journals and previous case studies, this presentation will attempt to inform an interdisciplinary audience about ADDWOC, symptoms associated with it, the mechanism by which it arises, possible treatment options, and the broader implications ADDWOC might hold in the scientific and medical community.

AUTHOR(S): Sherene Sanders

TITLE: Optimizing Biodiversity: Why a Controlled Burn is Crucial for Maintaining IUS Campus Pollinator Patch

FACULTY SPONSOR: David Taylor

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: Pollinator patches are important to a city environment as they can provide a place for pollinators to visit and get resources. Nuisance native and invasive species tend to be a problem that many pollinator patches can experience. The IUS pollinator patch is no different. This can be mitigated by utilizing herbicides, but the quickest and most effective way is through a prescribed burn. Fire departments would have great interest in this, and faculty and students can be involved. A prescribed burn can help control what grows back in the future to allow biodiversity to continue with necessary native plants.

AUTHOR(S): Amanda Scarberry

TITLE: Unlocking Homeownership: An Analysis of Housing Affordability in Indiana

FACULTY SPONSOR: Ranida Harris

EDUCATION LEVEL: Graduate

DISCIPLINE: Management, M.S.M.

ABSTRACT: Securing affordable housing in the United States has become increasingly challenging as high interest rates and low inventory place strain on many Americans. The state of Indiana is no exception – according to the Indiana Land Use Task Force in 2023, nearly 80% of Hoosiers are being priced out of the housing market. To address this issue, this project seeks to identify prevailing trends in Indiana’s housing market with which individuals can assess their ability to afford homes, provide community development leaders with key metrics for informed decision-making, and offer actionable suggestions on how to improve Indiana’s future.

AUTHOR(S): Jennifer Schultz

TITLE: You Need a Line for That: Intravenous Catheter Education in Science and Technology of Nursing Practicum

FACULTY SPONSOR: Christie Clare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Peripheral insertion of an intravenous (I.V.) catheter is a common nursing intervention. I.V. catheters are used for medication administration and restoring homeostasis. An Indiana University Southeast senior Nursing student instructed sophomore Nursing students on proper I.V. insertion in the Science and Technology of Nursing course. Students learned proper locations for I.V. placement, safe technique, and preparation before insertion. Students were also educated on common I.V. complications and care to prevent further injury. This poster displays an evaluation of knowledge attained by sophomore Nursing students after data was collected from a pre- and post-test.

AUTHOR(S): Christian Scott

TITLE: Two Cooperative Futures for the Academy

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: General Studies

ABSTRACT: This project is an exploration of two ideas that uphold democratic principle; sortition, the selection of representatives by lot, and cooperatives, organizations that unite to meet goals via democratically controlled activities.

AUTHOR(S): Brianna Self, Hailey Dotson, Megan Gogel, Angela Hampton, Kaelin Hall

TITLE: Campus Health Fair: Providing Community Resources to Students and Faculty

FACULTY SPONSOR: Shelley Leezer

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Health fairs are a way for communities to educate and raise awareness about local resources available. This is important for college-aged students because

accessibility and knowledge of resources is limited, due to lack of transportation or unfamiliarity with the area. To aid in this knowledge deficit gap, IUS senior Nursing Students hosted a health fair on campus. These students invited a variety of local organizations to educate and provide information about services available to students and faculty. This poster will present examples of vendors who participated, survey results after the health fair, and topics discussed at the health fair.

AUTHOR(S): Clara Sellers

TITLE: Assessing Population Demographics of Nubian Ibex in the Wadi Rum Nature Reserve, Jordan

FACULTY SPONSOR: Omar Attum

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: The Nubian Ibex is an IUCN vulnerable species found in Northeast Africa and the Middle East. Very little is known about Nubian Ibex populations. Assessing population demographics provides useful ways to gauge population status when it is not possible to conduct a census. Camera traps placed at water holes allow us to collect demographic data. The objective of this research is to examine population demographics (sex ratio, fecundity, and recruitment) of Nubian Ibex in the Wadi Rum Nature Reserve, Jordan. Preliminary analysis suggests Ibex populations in Wadi Rum may be stable but could be vulnerable to increased human pressures.

AUTHOR(S): Clara Sellers

TITLE: Proposal for IU Southeast to become recognized by the Tree Campus USA Program

FACULTY SPONSOR: David Taylor

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Sustainability and Regeneration

ABSTRACT: Tree Campus USA is a program that recognizes universities working to implement best tree management practices while engaging students in service-learning projects. Receiving such recognition is important because trees and green spaces on campus not only improve the health of the regional environment but they can also be used as a means to increase the well-being of students, staff and faculty. By assessing the health of trees on campus and reviewing management practices, we are able to better identify what IUS must do to be recognized as a Tree Campus.

AUTHOR(S): Haley Seng

TITLE: Student Growth: Theme

FACULTY SPONSOR: Steffany Maher

EDUCATION LEVEL: Graduate

DISCIPLINE: Secondary Education, M.S.Ed.

ABSTRACT: In this project, I will showcase my students growth throughout this semester focusing on theme within a novel.

AUTHOR(S): Alex Settles

TITLE: Antimicrobial Properties of Silver Nanoparticles

FACULTY SPONSOR: Nidhi Shah

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Chemistry

ABSTRACT: Metal nanoparticles have been used for medical applications due to their unique antimicrobial properties. They are effective against many pathogens. Our research focuses on the study of the antimicrobial properties of silver nanoparticles (Ag NPs). It has been studied that different shapes of NPs cause different degrees of bacterial cell damage. Metal nanoparticles also show unique optical properties. UV-Vis Spectroscopy has been used to characterize the antibacterial properties of metal nanoparticles. Ag NPs of colloidal, rod, and plate-shape are used in this study to determine what nanoparticle will have the greatest effect on bacteria.

AUTHOR(S): Kaitlin Skirvin

TITLE: Undiagnosed vs. Diagnosed ADHD in Accordance to Risky Behaviors

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: I will be exploring the differences between individuals diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD) and those who exhibit symptoms but have not been diagnosed. It particularly looks into risky behaviors and aims to recruit participants through social media platforms and flyers. Qualtrics will be used to administer the survey, while the Adult ADHD Self-Report Scale (ASRS-v1.1) and the Domain Specific Risk-Taking Scale (DOSPERT) will be used to evaluate ADHD symptoms and assess risky behaviors, respectively. Data will soon be collected and analyzed to determine the differences in risk-taking decisions and the correlation between ADHD treatment, symptoms, and risk-taking tendencies.

AUTHOR(S): Gabriel Smith, Rubi Sanchez

TITLE: Deciphering Doobydoo

FACULTY SPONSOR: Beth Rueschhoff

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: This semester, we are honored to be annotating a virus that infects bacterial hosts and has properties shared by all viruses, also known as bacteriophages. We used Doobydoo bacteriophage as part of a greater initiative known as SEA-PHAGES. We're going through its genetic code, deducing if the various features are genes and where the possible start points can be and determine their functions with various supplemental evidence. We are halfway through and have started to assign functions to genes. We will have our research finished and submit it to GenBank, the repository for genome and protein sequence information.

AUTHOR(S): Molly Sneed, Morgan Huttzell

TITLE: The Effects of Social Media on Body Image

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Research states more social media usage leads to lower positive body image. The current study investigates the effects social media has on body image, age,

and gender. An online survey will evaluate social media usage and body image. With higher social media usage positive body image decreases, females and nonbinary individuals will have a lower positive body image than males and nonbinary individuals will have the lowest. We also expect younger adults to have lower positive body image than older adults. The results suggest that using social media can be dangerous and being aware can help protect us.

AUTHOR(S): Alexis Striegel, Amanda Castle, Holly Cary, Ryan Hammond

TITLE: Reaching Resources: How Access to Community Resources Affects Families in Downtown Jeffersonville

FACULTY SPONSOR: Teresa Stengel

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Healthy People 2030 identifies health goals helping communities across the United States improve health and well-being (Health.gov, 2024). This project was in partnership with a local school to help families navigate Jeffersonville community resources, such as nutritional programs, food pantries, and mental health services to achieve these goals. Indiana University Southeast senior Nursing students created an accessible document via QR code that provides resources for family use. The document was distributed to families and staff at the elementary school. This poster presents how access to community resources can impact a family's health related to Healthy People 2030's goals.

AUTHOR(S): Alexis Striegel

TITLE: Diabetes, not Diabetic: the Implications of the Education of Children Newly Diagnosed with Type 1

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: As of 2018, 18,200 children are diagnosed with type 1 diabetes (T1D) annually, and the number continues to grow. Educating children newly diagnosed with T1D is essential to help normalize their experiences and empower them to live active, fulfilling lives. Through the composition of an engaging, accessible handbook, this project helps these children by giving them a baseline of knowledge compiled from scholarly literature and supplemented by primary survey data. Chronic illness in children can be very isolating because of how children want to fit in with their peers, and this handbook strives to make it easier for them.

AUTHOR(S): Emma Striegel

TITLE: How "Stan" Culture Can Affect an Entire Group of People: A Deep Dive Into the Fan Communities of Minecraft Youtubers

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: In 2019, at a convention for the streaming service Twitch, a fan stole a water bottle belonging to Youtuber Cooper Schulz and posted about it online. The overstepping of boundaries of content creators like this has been connected to "stan"

culture. This amalgamation of “stalker” and “fan” is best characterized by obsessive fans of celebrities. Through a mixed analysis of written fan works and an original survey directed towards fans in this community, this project’s goal is to examine the effects that “stan” culture has on a community of people, focusing on popular Minecraft Youtubers after 2019.

AUTHOR(S): Breanne Sturgeon

TITLE: Intentional Rounding: A Management Experience

FACULTY SPONSOR: Janice McMahan

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Intentional rounding is a team effort of the nursing staff to ensure that needs are met to provide satisfaction for patients and their families. Employee education was assigned in the education portal to ensure that the new policy was clear to the employees. Indiana University Southeast (IUS) senior Nursing students followed with the nursing manager of critical care services at a local hospital to confirm efficacy of the new policy. This poster will present the evaluation of intentional patient rounding which includes a quality assessment forum for the nurses to provide feedback on one another.

AUTHOR(S): Chloe Terwiske, Alexis Franks

TITLE: Game Changers: Investigating Mental Health Challenges Among College Athletes

FACULTY SPONSOR: Aimee Adam

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: The widespread presence of mental health issues among college athletes has been of growing concern in recent years. We aim to explore the relationship between alcohol use, stigma, gender, and mental health of college student athletes aged 18 to 24. We will use a correlational analysis design, and public social media posts will be the main form of participant recruitment. The Qualtrics survey will measure variables such as alcohol consumption, mental health symptoms, perceived stigma, and gender.

AUTHOR(S): Drew Thornton, Ethan Thornton

TITLE: Relationship Between Work Hours, Job Satisfaction, and Mental Health

FACULTY SPONSOR: Brittany A. Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: The purpose of this study is to find relationships between work hours, job satisfaction, and mental health. Participants will complete a survey containing questions relating to these topics. We hypothesize the following: there will be a significant correlation between work hours and mental health; there will be a significant correlation between work hours and job satisfaction; there will be a correlation of some kind between job satisfaction and mental health; there will not be a difference in job satisfaction between genders in the workplace; and there will not be a difference in mental health between genders in the workplace.

AUTHOR(S): Thomas Tudor

TITLE: Rain in Australia

FACULTY SPONSOR: Chris Kimmer

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: I will use the Rain in Australia dataset. With this dataset, I hope to be able to see if can predict if it is going to rain the next day in Australia and to look back and seeing if there are any changes from the past couple of months. I will also see if there are any changes in the environment lately to see if anything could disrupt the rain flow in Australia. I will use classification as a data mining approach. I will also compare the different classification approaches.

AUTHOR(S): Thomas Tudor

TITLE: Preventing Data Breaches in Biomedical Devices: A Case Study on Artificial Pancreas

FACULTY SPONSOR: Sridhar Ramachandran

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: In this research project, we explore the critical issue of data security in biomedical devices. The significance of this project is that it highlights the potential risks of data breaches and the importance of implementing robust security measures. We propose a Duo Security measure to ensure that only the correct person can access the data. This project can be used as a template for developing secure biomedical devices. Immediate benefits of this project include enhancing the safety and privacy of users of artificial pancreas devices, preventing data theft, and avoiding the potential loss of valuable health data.

AUTHOR(S): Thomas Tudor, Nicholas Coles

TITLE: Wordcloud Front End for Search Engine

FACULTY SPONSOR: Chris Kimmer

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Informatics

ABSTRACT: What we will be doing is printing a front end for a search engine. Our output is going to be Wordcloud, and we are going to do this and show how we did so and what steps were involved. We are going to be running tests as well to see if what we are doing results in the expected outcome. We will be monitoring those results as well and recording our results from the project. If there are any errors, we will be going over our work after it is complete.

AUTHOR(S): Avery Vormbrock

TITLE: Financial Stress, Anxiety Levels, and Social Support Within College Students

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Researchers have found a correlation between financial stress levels, anxiety levels, and the amount of social support received within college students. Earlier

research has indicated that factors such as gender and being a first-generation student can influence these variables. The current study will explore the relationship between financial stress levels, anxiety levels, and the amount of social support received within college students. Future results of the current study could demonstrate a correlation between financial stress and anxiety, as well as anxiety and social support. The future results could vary based on gender and being a first-generation college student.

AUTHOR(S): Cole Walker

TITLE: PHB-Degrading Bacteria Found in University Soil and Urban Waterways

FACULTY SPONSOR: David Treves

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: Poly-hydroxyl butyrate (PHB) is a plastic polymer commonly found in products such as plastic bags. There are types of bacteria which can degrade this polymer and use it as a carbon source for growth. Our investigation focuses on locating these PHB degrading bacteria in our local environment by sampling from our local soil and waterways. The goal is to locate and then identify the strains of bacteria which are readily degrading the polymer with future implications of identifying more with the potential of using these bacteria to aid in degradation of plastic waste.

AUTHOR(S): Zoe Wallace

TITLE: The In's & Out's of Infection Control: Preventing Infection During Catheter Insertion and the Prevalence of Catheter Associated Urinary Tract Infections (CAUTIs)

FACULTY SPONSOR: Christie Clare

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: Patients who are hospitalized and require a urinary catheter have an increased risk of acquiring a urinary tract infection. This can prolong the patient's hospital stay and increase associated costs during admission. To ensure that sophomore Nursing students are using the correct procedure during catheter insertion to prevent infection in the clinical setting, an IUS senior Nursing student demonstrated proper catheter insertion using sterile technique. This poster will present data related to the students knowledge of catheter insertion and confidence in maintaining sterile technique throughout the entire catheter insertion procedure.

AUTHOR(S): India Watkins

TITLE: You Want to Look Away, But You Can't: The Evolution of Mukbangs

FACULTY SPONSOR: James Hollenback

EDUCATION LEVEL: Graduate

DISCIPLINE: Interdisciplinary Studies, M.I.S.

ABSTRACT: This project aims to explore the anomalies in the evolution of the Mukbang culture with the rise of social media to dissect the contentious issues surrounding the exploitation of food resources to captivate online audiences. By examining the consumption of foreign cuisine, virtually, the research aims to discern the boundaries between societal normalities and the acceptance of unconventional practices within Mukbang content. Through a methodical analysis of secondary sources (academic literature and social media content analysis), the project will shed light on the

controversies surrounding taboo actions to lure viewers on platforms like TikTok, Instagram, and YouTube.

AUTHOR(S): Brittany Watteau-Gebby, Bailee Johnson, Kade Wohlleb, Lauren Stapp

TITLE: Louisville Metro Crash Course Analysis

FACULTY SPONSOR: Ranida Harris

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Business

ABSTRACT: The Louisville Metro is a high traffic area due to its continuous growth and popularity. From this, residents have seen a change in traffic patterns and the result has been an increase in vehicle collisions. This project investigates factors related to crashes such as weather, manner of crash, road conditions and characteristics. We have compared our findings with other metropolitan areas, including Memphis and Detroit, to see if the number of collisions is similar based on population and location. With this information, we have compiled evidence-based strategies to minimize accidents and make the Louisville Metro area safer for drivers.

AUTHOR(S): Casey A. Weber

TITLE: Developing New Techniques to Identify Yeast in a Sourdough Starter

FACULTY SPONSOR: Margaret Wallen

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: The goal of this research was developing a technique to identify yeast found within a sourdough starter without having to individually culture organisms. To remove residual flour and other nutrients, samples of sourdough culture were centrifuged at low speeds. The supernatant was removed, and DNA was isolated from the supernatant using a lithium acetate-based protocol. The strategy was to isolate total genomic DNA, use polymerase chain reaction (PCR) to amplify conserved ribosomal rRNA sequences, and clone them into a vector for sequencing. *Saccharomyces cerevisiae*, a known component of most sourdough cultures, was used as a positive control.

AUTHOR(S): Faith Wilder

TITLE: The Relationship Between Marijuana/Cannabis and Mental Health

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study will examine the effect marijuana/cannabis use has on mental health issues and suicidal ideation. There are three hypotheses: individuals who use marijuana will have worsen mental health symptoms in comparison to those who do not, individuals who use marijuana will have more suicidal ideation in comparison to those who do not, and a positive correlation between worsen mental health issues and higher suicidal ideation. A survey will be done online. Results will show cannabis will negatively affect mental health. The conclusions will show this drug can have negative effects on one's mental health.

AUTHOR(S): Haley Williams

TITLE: The Effects of Attachment Style and Marital Status on Adult Romantic Relationship Satisfaction

FACULTY SPONSOR: Brittany Sizemore

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: Previous research has found a correlation between adult romantic relationship satisfaction, marital status, and attachment style. The purpose of this study is to investigate the impact of attachment style and marital status on romantic relationship satisfaction through an online survey. It's hypothesized that an anxious or avoidant attachment style will lead to lower levels of romantic relationship satisfaction than a secure attachment style. Researchers also hypothesize that married individuals will have less relationship satisfaction than unmarried individuals. The expected results could suggest a correlation between romantic relationship satisfaction and attachment style and between romantic relationship satisfaction and attachment style.

AUTHOR(S): Patrick Williams

TITLE: How do Students Perform Online vs. in the Traditional Classroom

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This work will examine different data to see if we can determine whether or not students learn better in an online digital environment or a traditional class room, and what the pros and cons are for both.

AUTHOR(S): Brandon Wilson

TITLE: Work Stress, Life Stress, and Workplace Absenteeism

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Psychology

ABSTRACT: This study examines how work stress and life stress correlate with workplace absenteeism. Workplace absenteeism is an important topic because it costs many companies thousands of dollars, if not more, to replace employees. Participants answered a brief survey to determine what form of stress they experience and how often they are absent from work. It was hypothesized that non-workplace stress will correlate more highly with workplace absenteeism than workplace stress will.

AUTHOR(S): Zach Wiseman, Myah Bagshaw, Luis Martinez, Nathen Magallanes

TITLE: From Strays to Homes: A Study of Animal Intake and Adoption Trends

FACULTY SPONSOR: Ranida Harris

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Business

ABSTRACT: This study focuses on improving animal welfare in Louisville Metro through comprehensive analysis of diverse animal data. Louisville Metro Animal Services (LMAS) aims to enhance outcomes and adoption rates while increasing community engagement. Utilizing datasets from the Louisville Metro Open Data Portal, including animal intake/outcome and license data, this initiative seeks to derive insights

and propose evidence-based policies. By addressing key questions and driving informed decisions, the project aims to contribute to better practices and overall well-being for animals in Louisville Metro.

AUTHOR(S): Rachel Wood

TITLE: Doodling or Visual Notes? Utilizing Visual Note-taking Within a Class Novel

FACULTY SPONSOR: Steffany Maher

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: 9th grade English students took visual notes during their unit of *Percy Jackson & the Olympians: The Lightning Thief* by Rick Riordan. The presentation will focus on the function and benefits of visual note-taking as an alternative form of taking notes and how it engages student creativity. The presenter will reflect on the unit and discuss whether or not visual note-taking was successful, which will be supported by various methods of data collection.

AUTHOR(S): Sarah Wooten

TITLE: Insects in Agriculture

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Biology

ABSTRACT: I will be discussing how insects have influenced agriculture, such as pest insects to how insects benefit crops to the environmental effects, to the effects on our food webs, and the ways to better our farming practices.

AUTHOR(S): Dana Wright

TITLE: Strengthening Learning through Hands-on Labs and how Inclusion Strategies Enhance Learning Experience

FACULTY SPONSOR: James Hollenbeck

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Education

ABSTRACT: This study looks into the benefits of hands-on labs in a science classroom and how inclusion strategies can be applied to enhance the learning experience for all students. Hands-on labs in a science classroom have been recognized by teachers as a valuable tool for engaging students and is a way to promote active learning. This allows them to deepen their understanding and retention of the standards. Inclusion strategies are necessary for all students no matter the background; this creates a more equitable laboratory experience for students. This study follows how these are incorporated and impact a student's learning experience.

AUTHOR(S): Kara Wright

TITLE: Held Together By the Sea: How Belfast Shipyards Shaped Tragedy

FACULTY SPONSOR: Robert Rennie

EDUCATION LEVEL: Undergraduate

DISCIPLINE: History

ABSTRACT: One thing in common between artists during the Renaissance, oil tycoons during the Industrial Revolution, and shipbuilders during the Great Potato Famine is the

impact their work had on society. Industry shapes history in an undeniable way. This project seeks to examine one facet of how shipbuilding impacted the working class of Belfast Ireland from the late 18th century to modern day by specifically examining the humanistic role the Harland and Wolff firm had in shaping how individuals fashioned their lives in the communities of Belfast.

AUTHOR(S): Kara Wright, Andrew Roy, Caleb Roy, Keziah Jones

TITLE: The Gospel and the Modern World: An Investigation of the Teachings and Personal Implications of the Bible

FACULTY SPONSOR: Rebekah Dement

EDUCATION LEVEL: Undergraduate

DISCIPLINE: History

ABSTRACT: Christianity is the largest religion in the world with more than two billion followers (Britannica). However, according to the Pew Research Center, only a little over half of Americans know the Ten Commandments. The cultural perceptions of a religion may not always reflect the heart of that faith. Seeking to explore the connection between perception and practice, this research project will explore how the Gospel answers the questions of hope, peace, and purpose in life. Utilizing theological resources, scholarly journals, and interviews, this presentation will explore one of the largest religions.

AUTHOR(S): Keely Wright

TITLE: Bentham Applied to Lawrence v. Texas

FACULTY SPONSOR: Leigh Viner

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Philosophy

ABSTRACT: There is a question built into the U.S. Constitution. Every justice to hold court in the history of this nation has attempted to answer this question with their rulings: depending on the answer, the constitution is reinterpreted and torn down, built up again and reframed to suit that court's current ideology (which is rarely unanimous). Does the Constitution recognize rights or does it grant them? I will use the landmark case Lawrence v. Texas to analyze how the philosophy of Bentham influenced the oral argument and consequential ruling of the court.

AUTHOR(S): Munira Yasser

TITLE: The Effects of Social Media on Body Esteem

FACULTY SPONSOR: Todd Manson

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Neuroscience

ABSTRACT: The purpose of this study is to examine the relationship between social media and body esteem among college students. Social media is expanding among different platforms and is used by millions of young adults. Body esteem helps increase self esteem, self-acceptance and a healthy relationship with food and fitness. The first hypothesis is there will be a negative correlation between time spent on social media and body esteem. The second hypothesis is that more time on social media spent looking at beauty content will negatively correlate the most with body esteem.

AUTHOR(S): Emily Ziegler

TITLE: Educational Needs of Women with Gestational Diabetes Mellitus

FACULTY SPONSOR: Carla Hermann

EDUCATION LEVEL: Graduate

DISCIPLINE: Nursing, M.S.N.

ABSTRACT: Gestational diabetes mellitus (GDM) affects approximately two to ten percent of pregnant women each year in the United States and rates are increasing. Uncontrolled GDM leads to poor maternal and fetal outcomes. This projects purpose was to explore: (1) amount of GDM education received during pregnancy; (2) perceived effectiveness of GDM education; (3) gaps in GDM education; and (4) women's perceptions of preferred methods of education. Literature guided the development of an interview identifying the educational needs of women with GDM. Results will help provide effective education to improve pregnancy outcomes.

AUTHOR(S): Macie Zink, Kelly Sutton

TITLE: Education on Developmental Stages and Cultural Differences

FACULTY SPONSOR: Julie Mattingly

EDUCATION LEVEL: Undergraduate

DISCIPLINE: Nursing

ABSTRACT: It's important for nurses to understand the stages of development and cultural beliefs of their patients. Cultural differences and the developmental stage of the patient have an impact on their ability to understand, manage, and cope with the course of an illness, the meaning of a diagnosis, and the consequences of medical treatment. IUS senior Nursing students helped sophomore Nursing students learn about Erikson's Stages of Psychosocial Development while educating on how different cultural views impact the patient's healthcare experience. A pre- and post-test was used to gauge understanding. This poster will present the findings associated with this education.

AUTHOR(S): Tyler Zink

TITLE: "But Why Pick Salem?" How the 1988 Bomb Scare Almost Changed a Community & Shook the World

FACULTY SPONSOR: Elizabeth Gritter

EDUCATION LEVEL: Undergraduate

DISCIPLINE: History

ABSTRACT: In July 1988, the city of Salem, Indiana went into a state of panic when throughout the day, thirteen bombs were found next to municipal buildings and bridges. The ATF, FBI, the Army, and local authorities helped search for and disarmed all thirteen of the bombs; none of the bombs exploded. It took ten months of investigating to unearth the culprits of the bomb scare. Two men of Salem were arrested for the bombs and were found guilty at trial. The motive behind the bombs were to allegedly assassinate Frank Newkirk Jr., State Representative at that time.