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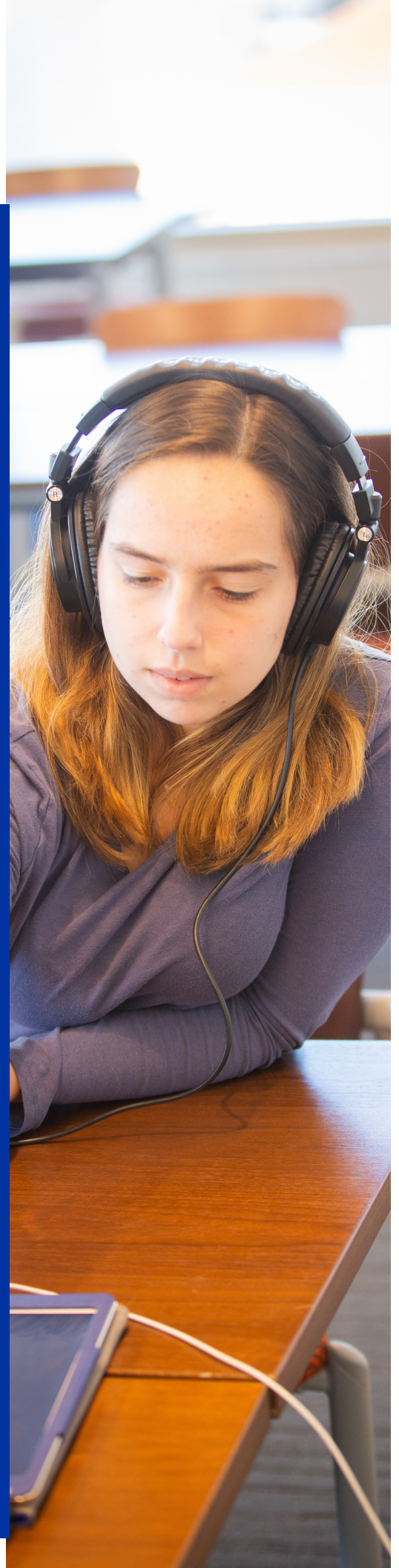
View examples of abstracts written by Emory students from different fields of study.



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SAMPLE ABSTRACT - ARTS AND CREATIVE EXPRESSION

The Price of Fright: Counting the Jumpscars in the Top 10 US Box Office Horror Movies

Sarah Marzouk

Under the direction of Dr. Rob Barracano

Horror movies all have one goal: to scare viewers. One common technique of accomplishing that goal is the usage of jumpscars, a method of scaring the audience with a sudden, unexpected, and frightening image, sound, or action. In this study I counted the jumpscars in each of the top 10 US box office horror films. These films are very financially successful, with each of them making at least \$150 million. While watching the films, I marked big and medium jumpscars with the letter 'A' and small jumpscars with 'B'. In addition, any questionable jumpscars were marked 'C'. I judged the rating of jumpscars based off a few factors, including the intensity of suspense preceding the jumpscare, the volume of sound used alongside the jumpscare, and the narrative use of the jumpscare. I then ranked the horror films on jumpscare count. I hypothesized that the movies that were ranked higher on the box office will have more jumpscars than the movies that were ranked lower. However, I found this not necessarily true; there was no clear correlation between box office ranking and jumpscare amount. Instead, I noticed something else: the older horror movies on the list tended to have fewer jumpscars than the newer ones. Thus, with this project, one can see that today's financially successful horror movies rely more on short-lived thrills and frights than prolonged tension or suspense. Such a realization can help people, from film theorists to horror directors to everyday movie-watchers, understand the cinematic makeup of today's famous horror films, ultimately deciding for themselves what it truly means to be scared.

SAMPLE ABSTRACT - BIOMEDICAL SCIENCES

Characterizing social behavior in prairie voles

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Under the direction of Dr. Megan Warren

Vocal communication plays a pivotal role in the social interactions of animals. One way rodents communicate in social settings is through ultrasonic vocalizations (USVs), which are above the range of human hearing. However, the specific role of USVs is not yet certain, and prior work on the subject has focused largely on communication in rats and mice. Vocal communication may be further understood using other rodent models, such as the prairie vole which, like humans, forms life-long pair bonds and is biparental. Prairie voles also have larger auditory cortices than other rodents (Campi et al., 2007; Krubitzer et al., 2011), indicating that audition may play a larger role in prairie vole behavior. Communication via USVs in prairie voles is understudied and much remains unknown about its underlying processes. Therefore, we aimed to assess the interplay between USVs, neural activity, and behavior by simultaneously recording video, audio (USV), and electrophysiology data. A vole with an implanted electrophysiology recorder was placed into a plexiglass arena either alone, with an unrestrained social partner, or with one or more social partners contained under a metal cup. Audio and video data were captured with a single microphone and overhead camera, respectively, while the electrophysiology data was obtained via an electrode positioned within the vole's amygdala or striatum. I used the video data to characterize vole behavior using Boris behavioral analysis (Version 8.0.9; Friard, 2016). I found that the voles engaged in numerous behaviors, including sniffing, grooming, eating, and huddling. Using this behavioral information, we plan to assess the interplay between behavior, vocalizations, and neural activity. Moving forward, we aim to better understand the relationship between USVs, neural activity, and behavior in the prairie vole and ultimately understand how this model might translate to the mechanisms underlying human neurodevelopmental disorders, such as autism spectrum disorder.



SAMPLE ABSTRACT - BUSINESS

The New Mad Men: How Direct Selling Representatives Are Using Social Media to Increase Reach and Sales

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Under the direction of Dr. Sandy Jap

Direct selling brands have their own employees sell their products directly to the end consumer, as opposed to retail brands that use distributors and stores as middlemen. In recent years, many direct selling consultants have used various social media platforms to increase their customer base and volume of units sold. This is a major shift from the traditional direct selling model that relied on employees hosting in-home selling parties and inviting people to browse and buy the products. This project analyzes how direct selling consultants have harnessed social media to increase sales and focused on defining and isolating the techniques consultants use. This has involved a series of informational interviews with sellers at different direct selling companies, collecting video trainings created by lead sellers for their teams (downlines) and observing facebook groups where relationship-building techniques are put into place. At this point in the study, we've come to realize four distinct trends. These sellers find success when (1) they employ "curiosity marketing" to engage prospects without revealing the identity and/or presence of the product until later on, (2) they focus on building some sort of relationship with a potential customer, (3) they utilize private Facebook groups to build communities of potential leads and (4) then sustain these communities through content generation, or "community assets." These trends are also informed by the type of social media platform used and the type of content produced. In traditional marketing courses, the limitations of time and money are often resolved by advertising the efficiency of a product or the benefits of a brand, but in this project, neither is the solution. These selling methods on social media shine a spotlight on the importance of relationships in the marketplace, as consumer markets become more competitive and transition into a virtual space.



SAMPLE ABSTRACT - HUMANITIES

Taxonomic Findings in the Herbarium: Investigating the “Ferns of Jamaica” Specimen Collection Book

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Contributing Author: Tharangamala Samarakoon

Under the direction of Dr. Cassandra Quave

The “Ferns of Jamaica” book, embossed with a gold title and wrapped in a dark red covering, has sat on the bookshelf in the Herbarium, untouched for years. It is likely over 100 years old, and numerous aesthetically placed ferns stand proudly against its yellowed pages. The author of this enigmatic book is unidentified but speculated to be Perry Wilbur Fattig, known entomologist and curator of the Emory Museum from 1926 to 1953. The purpose of this research is to identify and annotate all specimens in the book, trace its history, and explore the identity and life history of the potential author. General observations were conducted to examine the physical aspects of the book for clues alongside the author’s handwriting for comparison. The author’s life history was traced using public education, birth, marriage, and death records and by contacting Joseph McHugh, a professor and curator at the University of Georgia. However, the identity of the author is tentative and other options are open for exploration and will be detailed. The fern book was imaged using a Canon Eos 5D Mark II digital camera body placed in an ORTECH Photo e-Box plus. The updated nomenclature of ferns was confirmed through the International Plant Name Index (IPNI). The primary findings of this research include the identification and annotating of ferns and the recognition of their properties. The book contains twenty-three genera, one hundred and one species, and one hundred and six specimens of Jamaican ferns including species with renowned medicinal uses. The grander implication behind this research lies in the appreciation and value of historic taxonomic findings, the expansion of the Herbarium’s catalog, and the increase in data available for others to use in their studies.



SAMPLE ABSTRACT - NATURAL AND PHYSICAL SCIENCES

Spectroscopic Characterization of Small Metallic Compounds

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Under the direction of Dr. Michael Heaven

Characterizing the electronic structure of small metallic compounds is motivated by the need to test and refine theoretical predictions of their properties. This has applications to the reprocessing of spent nuclear fuel and satellite communication amongst other fields. The Heaven lab employs various spectroscopic and expansion-cooling techniques on beryllium clusters, lanthanide and actinide compounds, and other metallic species to determine their rotational and vibrational transition frequencies and subsequent structural characteristics. In this project, Dispersed Laser Induced Fluorescence (DLIF) will be used to characterize the rovibrational structure of the prototypical hydride species ThH and UH. In this process, vapor-phase UH or ThH is generated using laser ablation of pure metal targets in the presence of H₂. Tunable pulsed lasers are used to excite the hydrides. They subsequently emit fluorescence, and the emission spectrum reveals electronic, vibrational and rotational energy levels. A monochromator equipped with a high-gain array detector is used to determine the wavelengths corresponding to the fluorescent transitions. The data obtained from these measurements will be used to test the predictions of relativistic quantum chemistry calculations.



SAMPLE ABSTRACT - PUBLIC HEALTH

Personal Experiences Impact Abortion Attitudes Among Christian Protestant Communities Within Georgia

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Under the direction of Dr. Johanna Pringle

Religious beliefs play an influential role in a person's worldview, including their attitudes towards abortion and other reproductive health services. Although Protestant communities hold similar religious beliefs, Dozier et al., 2020 found diverse abortion attitudes among Protestant religious leaders, with attitudes ranging on a spectrum through pro-life, gray area, and pro-choice. The purpose of this study is to further examine the role personal sexual and reproductive health (SRH) experiences play on abortion attitudes among Protestant communities within Georgia. Distinctions between direct and indirect personal experiences were also of particular interest. Using qualitative data from the Center for Reproductive Health Research in the Southeast's EnFaith Study, the personal experience code was analyzed from a sample of 14 participants (7 religious leaders and 7 congregants). Qualitative data were analyzed by categorizing them by participant, direct and indirect experiences, abortion attitude (pro-choice, pro-life, gray area), and overarching themes. As a result, personal experiences were found to have an impact on abortion attitudes. Religious leaders and congregants who have had a direct SRH experience more frequently hold gray area attitudes towards abortion. Also, stigmatized SRH experiences were associated with gray area abortion attitudes. Conversely, participants that shared negative SRH experiences (i.e., rape, unintended pregnancy, etc.) expressed primarily pro-life and gray area attitudes. These results have demonstrated that personal experiences influence abortion attitudes. It also provides insight into why members of the Protestant community hold diverse and contradictory views on abortion. Both findings have increased our understanding in order to better implement reproductive health initiatives in religious communities.

SAMPLE ABSTRACT - SOCIAL SCIENCES

Evaluating the Impact of Peripartum Depression (PPD) on Epigenetic Age Acceleration using GrimAge

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Contributing Author: Anna Knight

Under the direction of Dr. Alicia Smith

Pregnancy can be a vulnerable time for expecting mothers as oftentimes comes with immense biological, financial and social changes that affect daily well-being. Thus, peripartum depression (PPD) is a common medical illness, affecting 1 in 7 pregnant women and involves feelings of extreme sadness, anxiety, indifference, and changes in routine during and after pregnancy. Previous research has shown that depression is correlated with negatively implicated epigenetic modifications. This study investigates whether peripartum depression is associated with epigenetic changes that are correlated with cellular aging. This study utilizes GrimAge, an epigenetic predictor of mortality that identifies age related DNA methylation of 12 plasma proteins upon considering lifetime tobacco smoking. Further, AgeAccelGrim was calculated as the residual after adjusting GrimAge for chronological age. From the Emory University African American Maternal Stress and Infant Gut Microbiome Cohort, 421 participants who were all expecting mothers provided blood samples between 6–27 gestation weeks. A multiple linear regression was performed to measure the association between categorical Edinburgh Postnatal Depression Scale (EPDS) scores and AgeAccelGrim, controlling for relevant covariates: tobacco, marijuana, monocytes, and education. EPDS scores of 10 or higher indicated that the individual may have peripartum depression. The results of this study found no statistical significance between having PPD and AgeAccelGrim. Thus, we concluded that having PPD during and post pregnancy is not correlated with increased age acceleration. Ultimately, the goal of this project is to aid the growing field of precision medicine which aims to take into account a patient's lifestyle, environment and genetics to better health outcomes. Future studies should attempt to examine this question longitudinally and investigate whether age acceleration will be associated with ongoing depression after pregnancy.