



Welcome to the 31<sup>st</sup> *Annual Undergraduate Symposium*. The *Symposium* highlights the research and scholarly achievements of Assumption students working in collaboration with dedicated faculty mentors. These collaborations represent a model for integrating teaching, original research, and the beneficial effects of peer review in promoting intellectual development and professional growth. The *Symposium* provides our community with the opportunity to gain greater appreciation of the individual and collective accomplishments of our students and their faculty mentors, as well as to applaud those achievements.

Sincerely,

A handwritten signature in black ink, reading "Marc D. Guerra". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Marc D. Guerra, Ph.D.  
Senior Vice President of Academic Affairs and Provost



# **31st Annual Undergraduate Symposium**

## **Program Schedule**

### **Monday, April 28, 2025**

<b>Time</b>	<b>Event</b>	<b>Location</b>
9:30-11:15am	Session A	TFAC Ballroom B
11:30-12:30pm	Session B	TFAC Ballroom B
10:30-12pm	Session C	TFAC Ballroom A
12:15-1:45pm	Session D	TFAC Ballroom A

### **Tuesday, April 29, 2025**

<b>Time</b>	<b>Event</b>	<b>Location</b>
9-10:30am	Session E	TFAC Ballroom B
11-12:15pm	Session D	TFAC Ballroom B
12:30-1:45pm	Session G	TFAC Ballroom B
2-3:30pm	Poster Session/Reception	TFAC Ballroom A

**Monday, April 28, 2025**  
**Session A: 9:30am – 11:15am**  
**TFAC Ballroom B**

**Moderator: Dr. Ben Knurr**  
**HUS/HSC and Humanities**

<b>Time</b>	<b>Presenter(s)</b>	<b>Title</b>
9:30am	Lindsey Kuniewich	Understanding the Specific Barriers of Immigrant Women Facing Intimate Partner Violence
9:45am	Lindsey Kuniewich	Understanding the Intersection of Postpartum Depression and Grief Following Infant Loss
10:00am	Talia Caloggero	The Birth Control Pill- A Liberator or Oppressor?
10:15am	Alyssa Johnson	The Cultures in Youth and Adult Sports
Coffee Break 10:30-10:45am		
10:45am	Thomas Lenaerts and Alessandro Domingo	La Mandragola and the USA
11:00am	Morgan Flodman	Wittenberg's Influence on Hamlet's Tragic Flaw

**Monday, April 28, 2025**  
**Session B: 11:30am – 12:30pm**  
**TFAC Ballroom B**

**Moderator: Dr. Raymond Albert**  
**Cyber Session**

<b>Time</b>	<b>Presenter(s)</b>	<b>Title</b>
11:30am	Junior Boderebe	Implementing SOC 2 and NIST Cybersecurity Framework (CSF) in Enterprise Security: A Case Study from Internship Experience
11:36am	Nicholas Calo	AWS Security: An Overview of the Security Measures in the Cloud
11:42am	Patrick D'Eufemia	APTs and Artificial Intelligence: How Threat Actors Use AI in Cyber Warfare
11:48am	Nicholas Giovanello	AI Assisted Secure Cloud Administration and Automation
11:54am	Joseph Krauza	Marketing Tactics in the Network Security Industry
12:00pm	Sean Lewis II	Federally Funded Cybersecurity Research and Development: Intern Experience
12:06pm	Ian McEntegart	Firewalls in Cloud Security
12:12pm	Maddox Murphy	Robotic Process Automation in the World of Cybersecurity
12:18pm	Robert Russell	Analysis of Analyst Roles in the Cybersecurity Workforce
12:24pm	Ethan Ryan	The Digital Cold War: Cyber Warfare Between Russia and the USA

**Monday, April 28, 2025**  
**Session C: 10:30am – 12:00pm**  
**TFAC Ballroom A**

**Moderator: Dr. Frank Prior**

**Criminology Session 1**

<b>Time</b>	<b>Presenter(s)</b>	<b>Title</b>
10:30am	Juliana Brien	The Experience of Domestic Violence Shelter Employees and Volunteers
10:45am	Crystal Mendez	How People of Low-Socioeconomic-Status Experience Well-Being Before and During Divorce
11:00am	Allison Smith	Secondary Responders Trauma: How Women in Shelter Environments Cope
11:15am	McKenzie Offley	Social Workers' View on Juvenile Crime
11:30am	Emely Tolento	Struggles Faced by Latino Men Seeking Drug Rehabilitation
11:45am	Allyson Wargo	Substance Use and Student Conduct on College Campuses

**Monday, April 28, 2025**  
**Session D: 12:15pm – 1:45pm**  
**TFAC Ballroom A**

**Moderator: Dr. Frank Prior**

**Criminology Session 2**

<b>Time</b>	<b>Presenter(s)</b>	<b>Title</b>
12:15pm	Colby Bartley	Law Enforcement's Perceptions of Body-Worn Cameras (BWC)
12:30pm	Adam Gilbert	Officer Perception of Interactions with Public
12:45pm	Colin McHugh	Exploring Effective Approaches to Law Enforcement Encounters with Those who Suffer from Serious Mental Health Conditions
1:00pm	Matthew Rondeau Jr.	How do Law Enforcement Officers Manage Work/Family Balance
1:15pm	Sean Stewart	The Impact of Community-Police Relationships on Public Perception: A Law Enforcement Perspective
1:30pm	Elesber Tejeda	Technology and Domestic Violence

**Tuesday, April 29, 2025**  
**Session E: 9:00am – 10:30am**  
**TFAC Ballroom B**

**Moderator: Dr. John Bell**

**HIS 180 Session**

<b>Time</b>	<b>Presenter(s)</b>	<b>Title</b>
9:00am	Penelope Batsarisakis, Maxinne Cardenas, Heidi Landaverde and Lia McDonald	Advertisements and A More Complete Picture of the History of Slavery
9:15am	Ina Bechle, Stella Cullity and Eva LaPorte	Working with Primary Sources to Learn about Slavery during the American Revolution
9:30am	Julianna Rizzitelli, Anna Shew and Madisen Watt	Learning about Slavery from Newspaper Advertisements
9:45am	Isabella Mastrototaro	Acting Up in Church: ACT UP's Stop the Church Protest and the Boundaries of Civil Discourse
10:00am	Anthony Fayette	The Principle of Ordered Liberty in the American Constitution
10:15am	Harrison Leone	Stonewall Riots: The Contested Origins of Gay Liberation
Coffee Break 10:30-11:00		

**Tuesday, April 29, 2025**  
**Session F: 11:00am – 12:15pm**  
**TFAC Ballroom B**

**Moderator: Dr. Erin Turtle**

**Science Session**

<b>Time</b>	<b>Presenter(s)</b>	<b>Title</b>
11:00am	Annie Fontaine	Amplify Every Voice: Insights from Assessment Tools
11:15am	Myles Alcindor	Cryptocurrency and Regulation: Security or Money?
11:30am	Daniel Liberty	Separating Crystal Violet Decomposition Kinetics from Flow Dynamics
11:45am	Christa Akariza Kanamugir Shekinah	Building a 671nm Cat's Eye Laser
12:00pm	Ngoc Nguyen	Anti-Proliferative Activity of Moschamine on a Breast Cancer Cell Line

**Tuesday, April 29, 2025**  
**Session G: 12:30pm – 1:45pm**  
**TFAC Ballroom B**

**Moderator: Dr. Ben Knurr**

**HIS 359 Session**

<b>Time</b>	<b>Presenter(s)</b>	<b>Title</b>
12:30pm	Katelyn Adams, Avi Miller and Ava Wojnarowski	Documenting the Undocumented: Advertisements about Enslaved People
12:45pm	Brielle Berube, Kyla Hughes and Isabella Nolan	Serving as Guest Curators for the Slavery Adverts 250 Project
1:00pm	Ryan Forrester, Conrad Miller-Fabregas and Angelo Rodrigues	What do we Mean by the American Revolution?
1:15pm	Connor Harris, Christopher Tocci and Olivia Tocci	More Than the News: Slavery Advertisements in Early American Newspapers
1:30pm	Tiana Jreij and Arianna Langford	Printers, Newspapers, and Slavery during the Era of the American Revolution

**Tuesday, April 29, 2025**  
**Poster Session and Reception: 2:00pm – 3:30pm**  
**TFAC Ballrooms**

2:00 Welcome Remarks, Dr. Marc Guerra, Senior Vice President for Academic Affairs and Provost

**Presenters:**

Abigail Block  
Aryana Santo  
Ashely MacGilvray  
Charlotte McGroarty  
Claire Pastrone  
Claire Thomassen  
Danny Portillo  
Isabela Ferullo  
Julia-Maria Aileni  
Kayla Braz  
Kylie Kealey  
Lauren Murphy  
Lindsey Kuniewich  
Lorilei Jones  
Madison Cantwell  
Madison Wells  
Marco Saccomanno

# SENIOR GRAPHIC SEMINAR DESIGN SHOWS

**D'ALZON LIBRARY GALLERY**  
**APRIL 23 - MAY 16**

**OPENING RECEPTION**  
**WEDNESDAY, APRIL 23**  
**4:30-6:00pm**  
Open to the public

**WORCESTER POPUP**  
**MAY 7 - MAY 11**

**OPENING RECEPTION**  
**SATURDAY, MAY 10**  
**6:00-8:00pm**  
**20 FRANKLIN STREET**  
**WORCESTER, MA**  
Free and open to the public

Katherine Adams

Dylan Brown

Meaghan Denette

Teresa Kayee

Nathaniel Krozy

Alena Nguyen

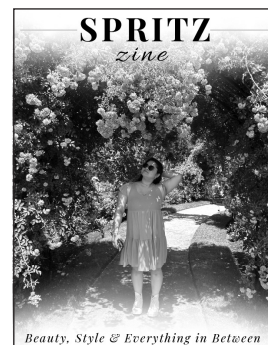
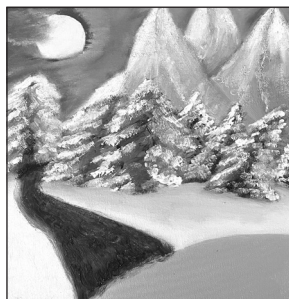
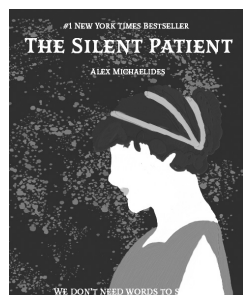
Madison Piehler

Brayelin Ramos Mota

Morgan Smith

Daniel Tran

FACULTY MENTOR  
Prof. Lynn Simmons



These are just a  
few of the works  
on display.



## **Abstracts**

### **Presentation Session A Panel 1**

**Monday April 28, 2025**

#### ***Understanding the Specific Barriers of Immigrant Women Facing Intimate Partner Violence***

**Lindsey Kuniewich '25**

**Human Services**

Intimate partner violence (IPV) refers to assaultive or controlling behaviors by one partner against another in an intimate relationship. These behaviors can manifest in the form of physical, verbal, emotional, financial, and sexual abuse. Survivors of IPV face barriers to help-seeking, such as lack of access to economic resources, fear of retaliation, and concerns about not being believed. Immigrant women experiencing IPV face additional, more specific barriers to help-seeking, including sociocultural stigma surrounding divorce and threats of deportation. Human services professionals must combine culturally responsive and trauma-informed approaches when working with this population, as they experience unique risk factors for IPV and barriers to help-seeking. Combining these approaches allows providers to recognize clients' experiences in the context of their trauma and cultural background. A literature review of IPV, trauma-informed care, and culturally responsive practices was conducted. This presentation concludes with evidence of best practices for immigrant women facing IPV.

*Faculty Mentors: Prof. Temperance Staples & Dr. Cinzia Pica*

#### ***Understanding the Intersection of Postpartum Depression and Grief Following Infant Loss***

**Lindsey Kuniewich '25**

**Human Services**

Neonatal loss is a jarring and traumatic event for parents and families. While both parents will grieve this sudden loss, mothers may also experience symptoms of grief and postpartum depression (PPD) concurrently. The coexistence of these symptoms is unique as they require providers to identify PPD and grief symptoms and understand both their individual and combined impact on a client. Providing high-quality bereavement care further requires clinicians to utilize trauma-informed approaches while recognizing cultural influences during the grieving process. A literature review of neonatal loss, grief, PPD, trauma-informed care, and culturally responsive practices was conducted. This presentation concludes with evidence of best practices for women simultaneously experiencing grief and PPD symptoms following neonatal loss.

*Faculty Mentor: Dr. Cinzia Pica*

#### ***The Birth Control Pill – A Liberator or Oppressor?***

**Talia Caloggero '25**

**Health and Human Services**

The oral contraceptive birth control pill, commonly referred to as "the pill", is considered the most revolutionary medical breakthrough since penicillin due to its capacity to separate sex from procreation, allowing more women to access education, escape poverty, and ultimately have control over their own destiny. Despite these benefits, there are many commonly known side-effects of the pill. Most of these are mild. However, when scientific literature is scrutinized, lesser known, sometimes more severe side-effects are identified. This project represents an inquiry into the lesser known moderate and severe side effects of the pill. These side effects are presented in two categories: 1. Impact on Mental Health 2. Impact on Physiological Health. The presentation will end with a discussion of the factors that impact the lack of dialogue on these lesser-known side effects.

*Faculty Mentor: Dr. Cinzia Pica*

## ***The Cultures in Youth and Adult Sports***

**Alyssa Johnson '25**

### **Humans Services and Rehabilitation Studies**

Coaching cultures and coaching tendencies in sports may have an influence on the mental wellness of athletes. Previous research suggests that athletes are influenced by the environment a coach creates, making this topic important when looking at improving the experiences of student-athletes worldwide. The purpose of this study was to gain insight into how athletes perceive coaching behaviors and the influence that those behaviors can have on their well-being. Understanding athletes' experiences within coaching cultures is important when looking at points of focus for human service workers, athletic departments, coaches, and athletes when fostering a healthy athletic environment. Participants in this study were asked to complete a 21-question survey exploring their experiences with coaching before the age of 16 versus coaching after the age of 16.

*Faculty Mentor: Dr. Christian Williams*

## **La Mandragola and the USA**

**Thomas Lenaerts '26 & Alessandro Domingo '27**

### **Italian Studies**

La Mandragola by Niccolo Machiavelli is a satiric, sixteenth century play focused on the heroic figure of Callimaco attempting to charm the virtuous Lucrezia. The comedy serves as a commentary on a devolving society, full of corruption and greed. Our presentation aims to elaborate the similarities between the characters of La Mandragola and the forces at play within the current political climate in the United States. We shall offer a synopsis of the play and its reception. We will discuss how each character relates to a component of American politics and how the play highlights the degradation of our democracy. Through the help of Ligurio, the puppet master who drives the story, Callimaco corrupts Lucrezia. Fra' Timoteo, a priest of the Catholic Church, corrupted by bribes, aides Callimaco's pursuit, mocking his sacred role. Messer Nicia, the fool and husband of Lucrezia, helps Callimaco unknowingly, contributing to his own disgrace. Sostrata, the mother of Lucrezia, is focused principally on her own personal ambitions of becoming a grandmother, rather than acting selflessly toward preserving the dignity and purity of her daughter. Each of these characters parallels a failing institution in America. Callimaco is a symbol of bribery, and the money used to corrupt individuals, Ligurio is the corporations who lobby, Fra' Timoteo is the politician corrupted by the corporations, Messer Nicia is the oblivious citizen who allows all this to happen, and Sostrata is the politician who is more focused on their own career than the good of the country, Lucrezia.

*Faculty Mentor: Dr. Richard Bonanno*

## ***Wittenberg's Influence on Hamlet's Tragic Flaw***

**Morgan Flodman '26**

### **English**

In William Shakespeare's Hamlet, the play begins when the title character returns home from school to find that his father has died and his mother has married his uncle, Claudius. The University of Wittenberg is an allusion that invites readers to consider the political and theological influences that shape Hamlet's tragic flaw in Shakespeare's greatest tragedy. Drawing on the scholarship of Stephen Greenblatt and others, a New Historicist reading of Hamlet recontextualizes the play at the height of the Protestant Reformation when the writings of German reformers Martin Luther and Philip Melancthon entered English religious thought in the wake of Henry VIII's establishment of Anglican Church. This paper considers the cultural context of Wittenberg from its establishment in 1502 to the publication of Hamlet in the early 17th century. In addition, an examination of the Wittenberg Sophocles (compiled in 1547) and Aristotle's definition of tragedy in his Poetics illustrate how the play-within-a-play evokes an interpretation of divine justice.

*Faculty Mentor: Dr. Kristen Carella*

## **Presentation Session B Panel 2**

**Monday April 28, 2025**

### ***Implementing SOC 2 and NIST Cybersecurity Framework (CSF) in Enterprise Security: A Case Study from Internship Experience***

**Junior Boderebe '25**

**Cybersecurity**

Enterprise security depends on structured frameworks that help organizations manage risks, meet compliance requirements, and strengthen their cybersecurity posture. SOC 2 and the NIST Cybersecurity Framework (CSF) are widely used in industries that prioritize data protection and regulatory compliance. SOC 2 ensures security, availability, processing integrity, confidentiality, and privacy, while NIST CSF provides a flexible, risk-based approach to managing cybersecurity threats. This report looks at real-world challenges organizations face when implementing these frameworks, along with best practices for improving compliance and security governance. It also examines the role of encryption, cryptographic controls, and AI-driven compliance automation, particularly with NIST AI RMF 600-1. By analyzing lessons from industry experience, this report provides practical recommendations for enterprises looking to improve security operations, regulatory alignment, and risk management strategies.

*Faculty Mentor: Dr. Raymond Albert*

### ***AWS Security: An Overview of the Security Measures in the Cloud***

**Nicholas Calo '25**

**Cybersecurity**

Cloud computing, while still in its infancy, has rapidly become an essential part of modern technology, revolutionizing how businesses and individuals manage data and applications. As one of the leading cloud service providers, Amazon Web Services (AWS) plays a pivotal role in shaping the landscape of cloud infrastructure. This paper explores the security measures in cloud environments, with a specific focus on AWS, and addresses key aspects such as industry standards, cryptographic advancements, and the application of artificial intelligence in enhancing security. By examining these elements, the paper aims to provide a comprehensive overview of cloud security, highlighting the challenges and solutions in safeguarding data in the cloud.

*Faculty Mentor: Dr. Raymond Albert*

### ***APTs and Artificial Intelligence: How Threat Actors Use AI in Cyber Warfare***

**Patrick D'Eufemia '25**

**Computer Science and Cybersecurity**

Advanced Persistent Threats (APTs), stealthy and sophisticated cyberattacks typically carried out by nation-states, have begun incorporating more artificial intelligence to enhance operational capabilities. This paper explores the role of AI in the augmentation of the APT attack lifecycle, which includes reconnaissance, exploit development, social engineering, malware development, evasion techniques, lateral movement, and more. Case studies of state-sponsored threat actors reveal AI's current ability to automate labor-intensive tasks like polymorphic malware generation and create convincing spear-phishing campaigns. Additionally, the paper identifies artifacts produced by AI and found within generated payloads helping in attribution and defense. While AI is complicating the detection and attribution effort it also paves the way for defenders to develop their own AI for intrusion detection, behavior analysis, and threat attribution. Initiatives and research programs like DARPA's AI Cyber Challenge and the UK's LASR project, reinforce the importance of collaboration of different agencies and governments around the world in countering AI-powered cyber-attacks. Overall, the combination of AI and APTs presents a new challenge and evolution in cyber warfare demanding new defenses and collaboration.

*Faculty Mentor: Dr. Raymond Albert*

## ***AI-Assisted Secure Cloud Administration and Automation***

**Nicholas Giovanello '25**

### **Cybersecurity**

As the capabilities of cloud computing and artificial intelligence (AI) grow, so do risk surface and compliance mandates. Standards such as CIS, NIST, and STIG exist, but their language is not always clear and actionable. This paper explores an automated cloud security compliance toolset utilizing AI, homomorphic encryption, Ansible, and compliance standards to reduce vulnerabilities in cloud networks. Homomorphic encryption maintains confidentiality and integrity, cornerstones of the CIA triad, by allowing for encrypted data analysis. AI-driven anomaly detection surpasses traditional algorithms' performance in picking up on behavioral patterns. Ansible and its automation capabilities are also very useful for making quick remediations for remote servers. This paper goes over previous research on AI-based intrusion detection systems along with their benefits and challenges to implementation. Through researching these tools, the goal is to shed light on the challenges and capabilities of AI-based cloud security tools.

*Faculty Mentor: Dr. Raymond Albert*

## ***Marketing Tactics in the Network Security Industry***

**Joseph Krauza '25**

### **Cybersecurity**

This paper explores the marketing tactics utilized in the network security and cybersecurity industries, which are rapidly growing and evolving. Companies that supply security technologies must use strong marketing and business strategies to stay competitive with other companies. This paper examines key market trends, competitive dynamics, and strategic approaches for differentiation and growth. Emerging trends such as tactical AI usage, machine identity management, and technology optimization shape the industry currently, and will continue to in the future. Effective marketing through brand positioning, digital outreach, and B2B/B2C strategies help build trust and generate leads for companies working to be successful. Business strategies, including AI integration, compliance-driven solutions, and strategic partnerships, will drive market success. Looking ahead, AI, automation, and regulatory changes will reshape cybersecurity marketing. The conclusion is that firms must innovate, enhance customer trust, and adapt to industry shifts for sustained growth.

*Faculty Mentor: Dr. Raymond Albert*

## ***Federally Funded Cybersecurity Research and Development: Intern Experience***

**Sean M. Lewis II '25**

### **Cybersecurity & Computer Science**

My internship experiences have allowed me to apply the knowledge I have gained from years of projects and classwork in a real-life setting. This opportunity enabled me not only to utilize my existing knowledge but also to learn new topics that I had not been exposed to before. I believe that presenting this unique experience of interning for federally funded R&D projects will be interesting and insightful for those who are early in their careers and looking to enter the cybersecurity industry. This presentation will offer valuable insights into a career path that many may not be familiar with.

*Faculty Mentor: Dr. Raymond Albert*

## ***Firewalls in Cloud Security***

**Ian McEntegart '26**

### **Cybersecurity**

Firewalls play a major role in securing cloud environments by using methods like monitoring traffic, blocking threats, and preventing unauthorized access. With cloud networks growing, firewall solutions have become a more

flexible way of protection across different infrastructures. Services like Firewall-as-a-Service help secure cloud networks by filtering traffic and detecting suspicious activity. Advanced firewalls can now use AI to improve threat detection and how to respond. Challenges are still present with encrypted traffic, misconfigurations, and new attack methods that can bypass defenses. Knowing the problems with Cloud security allows for better utilization for whatever your network's purpose and is fundamental to the inevitable growth of this very important industry. Though the future is speculative the hackers will keep getting better and as a field, everyone must watch out for emerging methods.

*Faculty Mentor: Dr. Raymond Albert*

### ***Robotic Process Automation in the World of Cybersecurity***

**Maddox Murphy '25**

**Cybersecurity**

Incorporating Robotic Process Automation (RPA) into regular cybersecurity practices can significantly benefit a business's security through several methods. The use of bots in RPA can be used to monitor security logs, more efficiently detecting suspicious logins and other activities. The bots can then be used to alert members of security teams to better resolve such threats. Bots can also be used to automate processes like patching, scanning, and even deploying fixes for vulnerabilities. Overall, efficient use of RPA processes can be a critical factor in effectively bolstering a company's cyber defenses.

*Faculty Mentor: Dr. Raymond Albert*

### ***Analysis of Analyst Roles in the Cybersecurity Workforce***

**Robert Russell '25**

**Cybersecurity**

The Cybersecurity workforce has a wide range of analyst positions. As such, the landscape of analyst positions has become muddled, and clear distinctions between roles have been lost. This paper aims to redefine some of those analyst positions and explain how cryptography and AI help support these roles. Various sources, including but not limited to the NIST Cybersecurity Framework, Department of Defense work roles, and multiple journal articles, all contribute to outlining tasks and expectations to help define these positions. Some key findings are that these roles simply do have overlaps in terms of some requirements and expectations, but they require specializations that are unique to each position. The hopeful outcome is to help businesses create properly defined positions with clear expectations but also to make it easier for Cybersecurity professionals to understand what is required of them within each role.

*Faculty Mentor: Dr. Raymond Albert*

### ***The Digital Cold War: Cyber Warfare Between Russia and the United States of America (USA)***

**Ethan Ryan '25**

**Cybersecurity**

The evolution of warfare has moved beyond traditional battlefields into the world of cyberspace. The ongoing cyber conflicts between Russia and the United States of America (USA) have led to significant geopolitical struggles, espionage, disinformation, and cyberattacks on government and industrial corporations. This paper examines important cyber incidents, the strategies that both nations have employed, and the broader implications of cyber warfare on the global scale. By examining several major cyber incidents such as the 2016 US election interference, the SolarWinds hack, and both the Petya and Not Petya malware attacks, this study highlights the growing importance surrounding cyber operations. Additionally, it talks about the importance of the ethical and legal implications and offers recommendations of future policies.

*Faculty Mentor: Dr. Raymond Albert*

**Presentation Session C Panel 3**  
**Monday April 28, 2025**

***The Experience of Domestic Violence Shelter Employees and Volunteers***

**Juliana Brien '25**

**Criminology**

A critical aspect of domestic violence that requires more research attention is the viewpoints and experiences of employees and volunteers that help victims in recovery shelters. Studying both their personal experiences working with victims, as well as their professional experiences providing aid and resources to traumatized individuals can develop more well-rounded research surrounding the topic of domestic violence, to shine light on those that aid victims on their journey to recovery. My research begs the question of how employees and volunteers working in domestic violence shelters navigate the challenges of providing resources and assistance to survivors and residents, and how do their professional and personal experiences offer support to victims? I intend to discover more regarding this question by selecting participants based on their levels of direct interactions with residents at the shelter. Once participants are selected, volunteers and employees will participate in live, semi-structured interviews, inquiring about different aspects of their position, how they specifically provide resources to survivors, and how their experiences have impacted their abilities to offer support to victims. Preliminary findings indicate how personal experiences impact the overall desire to enter the field of domestic violence aid, and how professional experience can enhance an employee's ability to offer resources to victims.

*Faculty Mentor: Dr. Francis Prior*

***How People of Low-Socioeconomic Status Experience Well-Being Before and During Divorce***

**Crystal Mendez '25**

**Criminology**

Research shows that divorce impacts low-income parents' well-being in multifaceted ways, influenced by financial, emotional, and social factors. Despite its prevalence, there is limited understanding of how people actively undergoing divorce perceive and experience their well-being during this process. This study seeks to answer the question: How do the reasons for divorce shape the well-being of low-income individuals during the process? Understanding the multidimensional nature of well-being during divorce within low socioeconomic individuals can provide valuable insights for professionals in legal, counseling, and community support roles, possibly informing more holistic approaches to support individuals as they navigate divorce. I will conduct five qualitative interviews with individuals seeking legal advice regarding their divorce. Participants are interviewed for 45 minutes to 1 hour and will be audio recorded. The interviews are designed to explore participants' experiences leading to divorce and their well-being during and after the divorce process.

*Faculty Mentor: Dr. Francis Prior*

***Secondary Responders Trauma: How Women in Shelter Environments Cope***

**Allison Smith '26**

**Criminology**

Non-profit workers experience secondary trauma through working with and assisting others who have undergone significant suffering. Although research has been done on both secondary trauma and secondary responders; there is a literature gap in relation to non-profit individuals. At a New England non-profit specializing in aiding women and children, five workers were involved in 20-60-minute qualitative interviews outlining why they chose to work with the specific population and how they handle the stress from the job. The results showed that through multiple paths to joining the organization were had, the decision to stay remained, as an interest in the

population was shown. All participants furthered this by explaining multiple ways to distress, but the most common was discussions with their coworkers at the organization.

*Faculty Mentor: Dr. Francis Prior*

### ***Social Workers' View on Juvenile Crime***

**McKenzie Offley '25**

**Criminology/Sociology**

Social workers play a big role in providing support for children in the juvenile justice system, who are dealing with a variety of challenges. How do social workers that have interacted with kids involved in the child welfare system view juvenile delinquency and detainment of their clients? I will be conducting 5 interviews with social workers to answer this question. The main purpose of this research is to discover the impact of intervention processes designed by social workers and how social workers feel about their interventions, i.e. how the punishments have changed and how social workers are viewing these punishments. What I have found so far is that from the perspective of the social workers the intervention programs that social workers have available are beneficial in the ways that they are used and the idea of being supportive while also making sure children take accountability for their actions has proved to be the best method and outcome of effectiveness within these programs.

*Faculty Mentor: Dr. Francis Prior*

### ***Struggles Faced by Latino Men in Seeking Drug Rehabilitation***

**Emely Tolentino '25**

**Criminology**

Latino men face significant struggles when it comes to receiving rehabilitation treatment in the United States. Those who provide rehabilitation treatment have important insight into what said struggles are. How do caseworkers perceive the struggles faced by Latino men seeking rehabilitation treatment? Five qualitative interviews will be conducted with the case workers who work regularly with Latino men. Initial results suggest that caseworkers, who were also Latinx, view Latino men as experiencing circumstances where it would be harder for them to maintain their sobriety. Interviewees also discussed how their clients face a lack of support from their immediate community when they are trying to complete the rehabilitation process since it is believed that they would be able to do it on their own without the proper help, implying that they lack self-control or perseverance. Interviewees also discussed is also a lack of culturally competent facilities to accommodate Latino men.

*Faculty mentor: Dr. Francis Prior*

### ***Substance Use and Student Conduct on College Campuses***

**Allyson Wargo '25**

**Criminology**

Alcohol and marijuana use pose various issues on college campuses throughout the United States, yet limited research examines the specific types of student conduct issues associated with these substances. The present study explores the various types of conduct issues that occur on one college campus from the perspective of conduct officers working in a community standards department. Five interviews ranging from 30-60 minutes in length were conducted to explore the relationship between alcohol and marijuana use and student conduct. Results show that alcohol tends to be more problematic and prevalent than marijuana. The biggest alcohol related concerns are violations of open container policies, alcohol assessments and transport, and cases of students who engage in conduct unbecoming. On the other hand, marijuana tends to have less conduct-related issues, with the most problematic issues being possession of marijuana paraphernalia and tampering with smoke detectors. Overall, alcohol use tends to have more severe consequences for college students compared to marijuana use.

*Faculty Mentor: Dr. Francis Prior*

## **Presentation Session D Panel 3**

**Monday April 28, 2025**

### ***Law Enforcement's Perceptions of Body-Worn Cameras (BWC)***

**Colby Bartley '25**

**Criminology**

In recent years there have been concerns over law enforcement accountability when it comes to use of force by members of law enforcement. One proposed idea to ensure accountability is to require members of law enforcement to utilize body-worn cameras (BWCs). Officers in increasing numbers across the United States are seen wearing BWCs while they are on duty, and this research project aims to gain their perspectives on the effects of BWCs. I aimed to inquire 30 police officers to answer a twenty-question survey, and their responses were recorded in a Likert scale ranging from strongly agree to strongly disagree to statements about BWCs. Preliminary findings thus far show that most of the officers were in strong agreement on statements pertaining to how BWCs can be helpful to officers in a variety of circumstances. Examples of these types of statements include "I think body cameras help protect officers from false accusations" and I believe that body camera footage is helpful in investigations."

*Faculty Mentor: Dr. Francis Prior*

### ***Officer Perception of Interactions with Public***

**Adam Gilbert '25**

**Criminology**

Ample information exists on the perspective of police interaction through the eyes of the public. Whether this is from social media, news outlets, or word of mouth these interactions are almost always explained through the eyes of the public. Meaning that there is a major gap in the understanding of police interaction with the public. How do the police perceive their interactions with the public? Through understanding this, the gap between understanding police interaction through the lens of purely the public can be closed. To understand this question, participants from a local police department participated in an intensive interview where their perceptions of the public were examined through questioning. Planning on conducting 5 interviews, preliminary research revealed that officers perceived their interactions with the public as dictated strongly by social media in their negative interactions. It was also revealed that depending on the nature of the call or the situation, previous calls and interactions are in mind during the process of the call. Meaning, police officers understand the implications of social media on the attitude of the public during their interactions. Further, previous calls, similar in nature, affect the interaction of future calls, leading to a learning curve amongst officers.

*Faculty Mentor: Dr. Francis Prior*

### ***Exploring Effective Approaches to Law Enforcement Encounters with Those who Suffer from Serious Mental Health Conditions***

**Colin McHugh '25**

**Criminology**

In recent years, interactions between law enforcement and members of the community with mental health issues such as schizophrenia have been increasing. The research questions this project attempts to answer are which tactics and approaches work best to de-escalate encounters between law enforcement and members of the community who suffer from serious mental health conditions. The information found within this research study was obtained by conducting five qualitative interviews with patrol officers. In these interviews, participants were asked questions regarding their personal experience when handling the aforementioned matters. After careful analysis of their responses, preliminary findings suggest several approaches such as standby mental health professionals that can be implemented into law enforcement agencies that may reduce escalation, lower arrest rates, and create a safer



environment for both the community and officers involved in these matters. In doing so, it will further the debate on how law enforcement should approach members of the community who suffer from mental health disorders.

*Faculty Mentor: Dr. Francis Prior*

### ***How do Law Enforcement Officers Manage Work/Family Balance***

**Matthew Rondeau '25**

#### **Criminology**

Balancing work and family life is a challenging thing to do in general, it is even harder for law enforcement officers to manage this. This study looks at how and what Police officers do to manage their work/family balance. What do police officers do to get out one role and get ready for the other, as well as what they do to destress and not let themselves get overwhelmed. I will be conducting 5 interviews with local police officers to gain a better insight into what they do, to balance their roles they need to play. Although work/family balance is a difficult thing, police officers still somehow manage to take time for themselves and their families. Thus far some participants said it is hard to switch from work mode to family mode and others said that it is quite easy for them to switch between the two. A key aspect of balancing the two is to make sure that you have some friends that are not in a law enforcement role to hang out with, so that you can get away from this line of field when hanging out with friends.

*Faculty Mentor: Dr. Francis Prior*

### ***The Impact of Community-Police Relationships on Public Perception: A Law Enforcement Perspective***

**Sean Stewart '25**

#### **Criminology**

Community-police relationships can be understood by how a law enforcement agency works within a community to improve communication and public safety. When looking at how a community views its local law enforcement, using these community-police relationships from the perspective of someone in the agency is helpful to understand how they are built in a community. Participants of this study, from a local law enforcement agency, will be interviewed on how they believe they impact their community for the better. Most of the officers interviewed said they enjoy working in the community they serve. They hold a strong relationship with many aspects of the town, including other agencies and businesses. Ensuring they stay true to the values and the mission of the department's standards, keeping a strong relationship within the community is in their best interest.

*Faculty Mentor: Dr. Francis Prior*

### ***Technology and Domestic Violence***

**Elesber Tejeda '25**

#### **Criminology**

Domestic violence can be recognized in its traditional verbal and physical forms, recently abusers have utilized online platforms to take their harassment to a new extent. The purpose of this study is to gather information on why cyber abuse should be receiving the same legal protection as traditional domestic violence cases because research can allow authorities and law enforcement agencies to efficiently extend their domestic violence policies to victims who are harassed online. The question to be answered by this study is How do attorneys view cyber harassment with respect to the dynamics of control and abuse in domestic violence cases? Participants will complete a 45–60-minute interview based on questions following how the legal system handles this form of abuse and what they are doing to protect victims. So far, my data has shown that when victims bring a cyber case to their attention, they would get an administrative subpoena which is a document that they would send to telecommunication companies like Instagram, Snapchat, and Facebook to track down the perpetrator and find out their identity. Once they have found the perpetrator, they continue to pursue the charges.

*Faculty Mentor: Dr. Francis Prior*

## **Presentation Session E Panel 4**

### **Tuesday April 29, 2025**

#### ***Advertisements and A More Complete Picture of the History of Slavery***

**Penelope Batsarisakis '28, Maxinne Cardenas '28,  
Heidi Landaverde Serrano '28, and Lia McDonald '28,  
History**

We have worked with newspapers from 250 years ago to identify advertisements and spread awareness about the history of slavery during the era of the American Revolution. We started by collecting newspapers and then identified the advertisements, such as notices about runaway slaves or enslaved people to be sold. For the final part of our project, we created tweets that would be posted with the intent of spreading awareness to as many people as possible. Through completing the project, we were able to learn about crucial primary sources and now have a more complete picture of the history of slavery in America.

*Faculty Mentor: Dr. Carl Keyes*

#### ***Working with Primary Sources to Learn about Slavery during the American Revolution***

**Ina Bechle '28, Stella Cullity '28, and Eva LaPorte '28  
History**

As guest curators for the *Slavery Adverts 250 Project*, we conducted research using primary sources from the eighteenth century that helped us learn about the era of the American Revolution. We conducted this research by putting together an archive of digitized newspapers from 1775, identifying advertisements about enslaved people in these newspapers, writing tweets about these advertisements to be posted on Twitter, and finally, making a presentation about slavery in the era of the American Revolution and what we learned about conducting research with primary sources. Through completing this project, we were able to learn a lot about slavery in the eighteenth century, especially specific aspects of the lives of these enslaved people that we otherwise would not have knowledge of and would not be able to find anywhere else.

*Faculty Mentor: Dr. Carl Keyes*

#### ***Learning about Slavery from Newspaper Advertisements***

**Julianna Rizzitelli '28, Anna Shew '28, and Madisen Watt '28  
History**

We are serving as guest curators for the *Slavery Adverts 250 Project*. During this process, we have learned about the experiences of enslaved people during the era of the American Revolution from newspapers advertisements. The first step was to compile digital copies of every newspaper from several weeks in 1775. The second step was to identify slavery advertisements in those newspapers. Then, we wrote tweets about slavery advertisements to be published on the project's Twitter's feed. Our final step is presenting our findings about what newspaper advertisements tell us about slavery during the era of the American Revolution.

*Faculty Mentor: Dr. Carl Keyes*

#### ***Acting Up in Church: ACT UP's Stop the Church Protest and the Boundaries of Civil Discourse***

**Isabella Mastrototaro '25  
History**

Americans are expected to obey the conventions of civil society. But where do the boundaries between civility and incivility lie, and who enforces them? The complexity of this question is highlighted by studying the activism of the AIDS Coalition to Unleash Power (ACT UP). Formed during the AIDS epidemic of the 1980s, ACT UP deliberately tested the boundaries of civil society in an effort to shock others into awareness of the injustices experienced by

LGBTQ+ populations during the AIDS crisis. ACT UP's Stop the Church protest of December 10, 1989, at St. Patrick's Cathedral in Manhattan employed theatrical and controversial methods to protest the perceived inhumane treatment by the Roman Catholic Church--and particularly New York Cardinal Joseph O'Connor--of LGBTQ+ people and people with AIDS. My presentation will discuss those events and contemplate such questions as: What is the difference between "civil" and "uncivil" protests? Who gets to define and police these concepts? Are protests that violate norms of decorum uncivil and even implicitly violent when emotional but no physical harm results? Can politeness conversely become a form of incivility and violence when deference to prescribed norms of behavior and the ideal of social order generates intolerance of dissent and perpetuates pain and suffering for others?

*Faculty Mentor: Dr. Deborah Kisatsky*

### ***The Principle of Ordered Liberty in the American Constitution***

**Anthony Fayette '25**

**Political Science**

The U.S. Constitution is *the* foundational document to America's republic, and it serves as the "supreme law of the land" (Art. VI) for American citizens. The republican government that the Constitution presents, however, is explained and defended best in the *Federalist Papers*, and not in the Constitution itself. But even the *Federalist* has an anthropological undercurrent for the political principles it asserts and defends. The anthro-political principle of ordered liberty, articulated best by John Adams and James Wilson, allows for a more full and accurate interpretation of the political principles that inform the Constitution. Liberty rightly understood is not the unadulterated will doing whatever it pleases; rather, its full expression is in the exercise of reason, the pursuit of the Good, and the self-regulation of one's passions and desires for the sake of the Good. This presentation summarizes an original capstone project that fulfills the final requirement of the Honors Program.

*Faculty Mentor: Dr. Jeremy Geddert*

### ***Stonewall Riots: The Contested Origins of Gay Liberation***

**Harrison Leone '25**

**History**

The Stonewall Riots of June 1969 marked a doubtlessly pivotal moment in the fight for queer rights within the United States. This paper examines the social and political conditions that permitted the popular gay uprising to take place, the key events that occurred as part of the riots themselves, and the continuing impact it has on discussions surrounding queer politics and rights within the United States today. As part of that exploration there is a vast examination of the extant debate about the role that the Stonewall Riots should play in modern classroom curricula and the collective queer consciousness of the United States. Ultimately, the conclusion reached is that the Stonewall Riots do present an incredibly potent moment for teaching all age groups about the history of gay liberation but only if the many histories that came before and after it are highlighted as equally important, equally potent, and equally telling.

*Faculty Mentor: Dr. Deborah Kisatsky*

## **Presentation Session F Panel 5**

**Tuesday April 29, 2025**

### ***Amplify Every Voice: Insights from Assessment Tools***

**Anne Fontaine '26**

**Education**

The National Council of Social Studies promotes a lifelong practice of civil discourse and civic engagement within communities. In order for this to happen, students need to see themselves in the curriculum. It is vital for students to have a representation of themselves in their own learning. Then students must be challenged at a level that pushes them just past their comfort level. This research used multiple assessment tools to evaluate pre-made instructional materials/lesson plans. Elements considered include evaluating content, developing skills as historians in training, considering cultural and linguistic responsiveness, and supporting diverse learners. Ultimately, this research provides a comprehensive evaluation and recommendation of assessment tools used to determine high-quality instructional materials in elementary social studies lessons. This presentation summarizes an original capstone project that fulfills the final requirement of the Honors Program.

*Faculty Mentor: Dr. Lisa D'Souza*

### ***Cryptocurrency Regulation – Security or Money?***

**Myles Alcindor '26**

**Finance**

This presentation evaluates the regulatory changes necessary for the most widely used cryptocurrency – Bitcoin – to be universally adopted as money. Bitcoin excels in four out of seven categories for the adoption of a commodity as money or currency. Bitcoin is portable, durable, divisible and secure. However, it currently falls short on liquidity, saleability and stability of value. The other weakness of Bitcoin is its use in criminal activity and the difficulty in protecting users from scams or the bankruptcy of intermediary cryptocurrency institutions. This presentation outlines the current regulatory landscape, which appears to embrace the limited use of cryptocurrency as a security or asset, but not yet as money, and discusses some of the regulatory changes that would be required to achieve the latter. Finally, this presentation explores the dilemma at the heart of the transformation of cryptocurrency into money. Governments must concede that they cannot simply replicate their control over fiat currencies to the cryptocurrencies of the future. However, cryptocurrencies cannot become mainstream currencies without regulation, which would contradict the free-market, anonymity and anti-establishment ethos of their creators.

*Faculty Mentor: Dr. Smriti Rao*

### ***Separating Crystal Violet Decomposition Kinetics from Flow Dynamics***

**Daniel Liberty 26'**

**Chemistry**

Crystal violet is a purple compound that when mixed with hydroxide ions forms a colorless solution, meaning the rate of reaction can be measured by monitoring the change in absorbance. The kinetics of this reaction are well studied, allowing it to be used as a test case for decoupling the laminar flow dynamics from the reaction kinetics. Crystal violet and hydroxide were thoroughly mixed in a 3-D printed millifluidic device and absorbance readings were measured as the solution flowed through the device. Each absorbance measurement contains numerous reaction times, defined by the flow dynamics. Using equations to model the flow and the size and shape of the probe region, a set of times measured at a specific point in the device can be generated. These times are then used to solve a large system of equations for the reaction rate constant,  $k$ . Preliminary results indicate a good agreement with the known rate constant, allowing for further experimentation with this method.

*Faculty Mentor: Dr. Benjamin Knurr*

***Building a 671 nm Cat's Eye Laser***  
**Christa Akariza Kanamugire Shekinah '26**

**Physics**

A cat's eye laser was built using a light emitting diode and the frequency response of the laser was characterized based on current and temperature. The laser is designed to emit single-frequency light at 670.96 nm and be able to scan over frequencies in that range. This laser will be used to measure the ionization energy of lithium and improve the measurements of the absolute energy levels of lithium. This presentation summarizes an original capstone project that fulfills the final requirement of the Honors Program.

*Faculty Mentor: Dr. Maria Teresa Herd*

***Anti-Proliferative Activity of Moschamine on a Breast Cancer Cell Line***

**Ngoc Nguyen '25**

**Biology**

There is a need to discover new, effective, and nontoxic small molecules targeted therapeutics for the treatment of cancer. Moschamine, a compound isolated from the plant species *Centaurea moschata* in 1997, was synthesized, and used to treat the breast cancer cell line, MDA-MB-231, to determine how the compound affects cell viability, which was assessed using the colorimetric MTT assay. At a concentration of 2  $\mu$ M, the compound was found to significantly decrease cell viability. This presentation summarizes an original capstone project that fulfills the final requirement of the Honors Program.

*Faculty Mentors: Dr. Elizabeth Colby Davie and Dr. Jessica McCready*

**Presentation Session G Panel 6**  
**Tuesday April 29, 2025**

***Documenting the Undocumented: Advertisements about Enslaved People***

**Katelyn Adams '27, Avi Miller '27, and Ava Wojnarowski '27**

**History**

In HIS 359 Revolutionary America, we worked on the *Slavery Adverts 250 Project*. Newspapers from the era of the American Revolution were spattered with advertisements about slavery just as frequently as any other kind of advertisements. We compiled an archive of newspapers from 1775 from several digital databases and then examined them for any mention of slavery. Such advertisements are frequently the only information obtainable about the lives of enslaved people. Many of these advertisements detailed the skills and experiences of the individuals represented in them. They described physical appearance, family details, and artisan skills, such as blacksmithing or weaving. The advertisements revealed aspects of enslaved people's lives that were otherwise undocumented. From the advertisements, we learned about the experiences of enslaved people during the era of the American Revolution.

*Faculty Mentor: Dr. Carl Keyes*

***Serving as Guest Curators for the Slavery Adverts 250 Project***

**Brielle Berube '27, Kyla Hughes '27, and Isabella Nolan '27**

**History**

"Newspapers published during the era of the American Revolution contributed to the perpetuation of slavery." That's the statement of purpose for Prof. Keyes's *Slavery Adverts 250 Project*. We served as guest curators. Our responsibilities included identifying advertisements for the buying and selling of enslaved people or the capture of runaway enslaved people in newspapers published in 1775 and posting those advertisements to the project's Twitter feed and website archive. Through this process, we investigated the role of newspaper printers as "slave brokers," and worked to uncover the underreported experiences of enslaved people who lived in Revolutionary

America. In our presentation, we will discuss highlights of our findings and main takeaways from participating in this project.

*Faculty Mentor: Dr. Carl Keyes*

***What do we mean by the American Revolution?***

**Ryan Forrester '27, Conrad Miller-Fabregas '27, and Angelo Rodrigues '27**

**History**

Our Revolutionary America course provided a plethora of knowledge about the nation's history from 1763 to 1815, including the involvement of women and slaves. Our presentation examines some of the experiences of Black men and women as revealed in newspaper advertisements that we located while working as guest curators for the *Slavery Adverts 250 Project*. Their stories help us think about the American Revolution in new ways as we consider a question that John Adams asked Thomas Jefferson: "What do we mean by the Revolution?"

*Faculty Mentor: Dr. Carl Keyes*

***More Than the News: Slavery Advertisements in Early American Newspapers***

**Connor Harris '27, Chris Tocci, '27, and Olivia Tocci '27**

**History**

The news is a central means by which people from all walks of life update themselves on the current happenings of their society and the world at large. Nowadays, news stories are largely maintained through one's handheld device or another form of technology, but this was not always the case. In the eighteenth, print culture was largely responsible for the dissemination of news. Newspapers took the happenings of elite figures in government and made them accessible for commoners, who otherwise wouldn't have access. Yet, this was not the only information disseminated through newspapers, as newspapers were a popular mode of advertising business ventures. Often, advertisements included listings for slaves to be sold or rented—motivating people from all walks of life to become involved with slavery. Our presentation examines some of those advertisements.

*Faculty Mentor: Dr. Carl Keyes*

***Printers, Newspapers, and Slavery during the Era of the American Revolution***

**Tiana Jreij '27 and Arianna Langford '27**

**History**

We contributed to Professor Keyes' *Slavery Adverts 250 Project* by gathering early American newspapers from digital archives and examining advertisements that depicted the selling of enslaved people and others that offered rewards for capturing enslaved people who ran away. These advertisements show a unique perspective on the prevalence of slavery throughout the colonies during the era of the American Revolution, including how newspaper printers served as slave brokers in "enquire of the printer" advertisements. The advertisements also provide a look into the lives of enslaved people who were sold, imprisoned, or liberated themselves.

*Faculty Mentor: Dr. Carl Keyes*

**Poster Session**

**Tuesday April 29, 2025**

***The Effect of State and Trait Anxiety on the Interpretation of Facial Expressions***

**Claire Pastrone '26, Julia-Maria Aileni, '26, Madison Cantwell '26, Charlotte McGroarty '26**

**Psychology**

The purpose of this study is to add to the already existing literature about interpreting facial expressions. Reading facial expressions is a vital part of interpersonal communication and affects every face-to-face conversation someone may have. Misinterpreting facial expressions can lead someone to many social problems. Previous research suggests that anxiety affects recognition accuracy through attention bias and interpretation bias. However, much of the existing data on this topic is conflicting and it will be useful to produce new data and results to have a better understanding of how anxiety can affect the identification of emotional facial expressions. The present study focuses on state and trait anxiety and their effects on the recognition of facial expressions. It is predicted that the results will show that those with higher state anxiety are worse at identifying facial expressions, while those with higher trait anxiety will do better.

*Faculty Mentor: Dr. Fang Zhang*

### ***How Caregiving Experience Affects Responding to Infant Crying***

**Abigail Block '25 & Lorilei Jones '25**

#### **Psychology**

Infant crying is something every caregiver experiences. Crying is how babies communicate their needs, often prompting caregiving behaviors aimed at soothing the needs of that child (e.g., rocking, feeding, playing). Understanding how caregivers respond to crying, particularly when it is an inconsolable cry, can be helpful for improving caregiving skills. The present study extended previous research (Thompson et al., 2011) by evaluating how neurotypical adults (ages 18 to 23), with and without prior caregiving experience, responded to sounds of infant crying. We assessed if a history of caregiving behavior would make participants more or less likely to respond to stop infant crying. If participants continued to respond with a specific response (e.g., rocking the baby), when that behavior resulted in the termination of infant crying, this would suggest their behavior was negatively reinforced. Negative reinforcement is when behavior increases because that behavior removes an aversive stimulus (e.g., the sound of crying). Using RealCareBaby® 3 Infant Simulators, participants were exposed to two conditions: (1) a negative reinforcement condition, where crying stopped depending on a specific caregiving behavior; and (2) a no-reinforcement condition, where crying persisted regardless of participants' responses. An ABAB research design was used to assess the effects of negative reinforcement on the participants' behavior during each condition. We found some differences in how participants responded based on their caregiving experience.

*Faculty Mentor: Dr. Nicole Pantano*

### ***The Effects of TikTok on Life Satisfaction, Stress Levels, and Attention Span***

**Lauren Murphy, '26, Aryana Santo, '26, Kayla Braz, '26, Marco Saccomanno, '25**

#### **Psychology**

The short-form media app TikTok has integrated itself into the everyday lives of many people, notably adolescents and college-aged individuals. Its prevalence, however, may have negative effects on the mental health and attention spans of users. This study aims to explore the effects of TikTok on life satisfaction, stress levels, and attention spans on Assumption University individuals (18 years or older) in relation to the types of user's individuals are, the type of content they watch, and how addicted they are to the app. We predict that the type of TikTok user is an individual, along with the types of content they watch and if they compare themselves to that content, it will affect their life satisfaction, stress levels, and attention span.

*Faculty Mentor: Dr. Fang Zhang*

### ***Doppler Ultrasonography in Predicting Onset of NEC in Neonates***

**Isabela Ferullo '25**

#### **Biology**

Necrotizing Enterocolitis (NEC) is an illness where the intestine becomes inflamed and causes entry of bacteria, leading to cellular damage, causing necrosis of the colon and intestinal cells, primarily affecting neonates.

Complications can include liver failure, short bowel syndrome, intestinal failure, nutritional deficiencies, and defects in growth and development. During the first postnatal day, Doppler ultrasound can be used to predict whether neonates are at risk of developing NEC when there are no obvious symptoms or signs of the disease. Doppler ultrasound is used to measure the velocity of blood flow in infants, specifically the peak systolic velocity in the Superior Mesenteric Artery, which is the main artery to the intestines. Furthermore, predictions of risk of NEC can be done for high-risk fetuses using the ductus venosus, a temporary blood vessel connected to the umbilical cord. This project will review the best practices of using Doppler Ultrasound to predict NEC and propose further research for effectively making use of Doppler Ultrasound to detect and diagnose the possibility of the neonate developing NEC.

*Faculty Mentor: Dr. Maria Teresa Herd*

***Understanding Factors That Impact Men's Perception of Women***  
**Kyli Kealey '26, Ava Mazzei '25, Kiera Newbury '25, and Grace Leary '25**  
**Psychology**

One's perception can be influenced by a variety of factors in everyday life. In the present research, men's perception of women's attractiveness was investigated. More specifically we examined how background color (red or blue), and prior emotional priming (positive or neutral) impacted women's attractiveness ratings. Participants were randomly assigned to view a series of either positive or neutral stimuli. They were then randomly assigned to view a woman with either a red or blue background. Participants then rated the woman on a variety of characteristics, including attractiveness. The findings indicated that neither background color nor emotional priming impacted the attractiveness of the woman. Findings are discussed in relation to previous research.

*Faculty Mentor: Dr. Maria Parmley*

***Factors Contributing to Higher Maternal Mortality Rate in the US Compared to Other Industrialized Countries***  
**Lindsey Kuniewich '25**  
**Human Services**

When compared to other industrialized nations, the United States possesses higher numbers of maternal mortality. In 2023, the maternal mortality ratio (MMR) in the United States was 21, while the MMR in both Sweden and Italy were 5 (UNICEF). As industrialized nations, all three enjoy advanced economies and developed technological infrastructure. However, there is a need to explore why the MMR of the US is significantly lower than that of its counterparts. Ultimately, there are varying factors that contribute to this contrast, and these factors influence the quality of perinatal care and the ways that patients interact with health services. A literature review of healthcare access, quality of reproductive healthcare, and gender equality in health services was conducted.

*Faculty Mentor: Dr. Cinzia Pica*

***Improving Well-Being and Reducing Stress Through Gratitude and Serenity Journaling***  
**Ashley MacGilvray '25**  
**Psychology**

The effectiveness of serenity and gratitude journaling to improve well-being and reduce stress was examined. Participants (N=50) completed three journal entries across a two-week period and self-reported their well-being and stress. Although the interaction was not significant, the gratitude and serenity journaling groups showed improved well-being and reduced stress when compared to the control condition. Additionally, we found that dispositional serenity was correlated to improved well-being and reduced stress, whereas dispositional gratitude was only correlated with psychological well-being. The present findings suggest that dispositional serenity plays a key role in improving well-being and reducing stress. Additional research could explore the benefits of serenity and



gratitude journaling. This presentation summarizes an original capstone project that fulfills the final requirement of the Honors Program.

*Faculty Mentor: Dr. Maria Parmley*

### ***Using Retrieval Practice to Learn and Apply Principles of Cognitive Behavioral Therapy***

**Danny Portillo '25**

#### **Psychology**

Retrieval practice (RP) is a superior method of studying that involves repeatedly taking tests during learning. RP is typically used in an academic setting, but in this project, I examined whether RP could be used to help individuals learn about their own negative thinking patterns and in turn relate to changes in their self-reported well-being. Participants were randomly assigned to learn about cognitive distortions (CD) or an unrelated control topic via a retrieval practice app for four weeks. Well-being, as defined by burnout, mood, and the tendency to engage in negative thinking, was measured at the beginning and end of the four-week learning phase. All participants also took a final test of new questions applying knowledge of distortions. Results showed that participants in both groups learned about their topic over time, and those in the CD group were better able to apply their knowledge to new questions about distorted thinking patterns. Neither group demonstrated changes in well-being across time. These findings suggest that while RP can enhance conceptual understanding of cognitive distortions, simply acquiring this knowledge may not be enough to impact well-being. More work is needed to understand the relationship between knowledge and well-being. This presentation summarizes an original capstone project that fulfills the final requirement of the Honors Program.

*Faculty Mentor: Dr. Leamarie Gordon*

### ***Under Pressure: How Extracurricular Activities Influence Anxiety and Depression in Students***

**Claire Thomassen '25**

#### **Psychology**

In recent years there has been a rise in feelings of anxiety and depression in college students, further impacting student mental health. However, there is little research on the specific factors that may impact overall mental health, student feelings, and perceptions of mental health on their campus, along with student exploration of resources available to students and their knowledge of these resources. We explored how different demographic factors (school type, major, extracurricular activities) relate to student mental health. In addition, we designed an open-ended survey exploring which strategies students use to support their mental health on college campuses. We found that student athletes have lower scores of depressions than non-athletes. Additionally, we found that students at a technological university have higher scores of depressions than those at a Catholic liberal arts university. There were no differences found between psychological well-being or anxiety scores based on athletics, school type, or extracurricular participation. There were also no differences in depression scores between those who participated in extracurricular activities or not. Additional results will be shared regarding student knowledge of resources and help seeking behavior. This project helps to inform universities to support their students' mental health so they may respond to students' needs. This presentation summarizes an original capstone project that fulfills the final requirement of the Honors Program. This presentation summarizes collaborative research conducted with a faculty member made possible by an Honors Summer Fellowship.

*Faculty Mentor: Dr. Hannah Smith*

### ***Conceptions of Computational Thinking Between STEM and Non-STEM Students***

**Madison Wells '25**

#### **Psychology**

The purpose of this study was to evaluate how gender and technology biases may affect existing student conceptions of computational thinking (CT). Additionally, we also aimed to observe the impact that personal student

characteristics, specifically prior programming experience, may have on existing conceptions of CT. As it stands, CT has no universally agreed upon definition and, instead, relies on a set of shared characteristics founded on a variety of CT frameworks. Our research questions asked (1.) Do participants' characteristics (programming experience) predict CT identification? and (2.) Do participants with programming experience reason more about CT using CT concepts? We created a survey that employed a total of eight vignettes, four intended to exemplify CT and four not intended to exemplify CT. Participants were asked to read each vignette and decided whether they believed each vignette was an example of computational thinking. They were subsequently asked to explain their answer. Randomization of male/female pronouns and technology inclusion/exclusion aimed to account for implicit gender and technology biases. A codebook containing CT and related concepts was used to qualitatively evaluate participant explanations. We found that vignettes 1 and 8 were identified as the most ambiguous amongst participants, indicative of the inherent ambiguity of CT with no concrete definition. In contrast to our hypothesis, programming experience was found to not be significantly associated with the likelihood of CT identification. However, and as aligned with our second hypothesis, CT concepts as reasoning were more prevalent among students with programming experience than those without.

*Faculty Mentor: Dr. Hannah Smith*

## Acknowledgements:

Thank you to all the students and faculty mentors for their willingness to share their original work from this academic year! Special thanks to Carrie Ferguson, and her student workers, Audrey Defillippo and Grace Ogilvie, for their work formatting the program and coordinating the behind the scenes of the symposium. Thank you to Prof. Raymond Albert, Prof. John Bell, and Prof. Francis Prior for moderating the oral presentation sessions. Thank you to Media Services and IT for their technological support and Aramark for catering the event. Thank you to Prof. Lynn Simmons for coordinating the design of the symposium logo and program and thank you also to Zachary Drew '27, Assumption University, for designing this year's Symposium logo. Finally, thank you to the Provost's Office for their continued financial support for this important campus wide event.