

HONORS PROGRAM

SENIOR THESIS REASEARCH CONFERENCE

DECEMBER 4, 2026
GAREY HALL
VILLANOVA UNIVERSITY

HONORS THESIS
CLASS OF 2027

Kevin Aldridge
Thomas Bork
Grayson Brooks
Antonio Corretjier
Jamie Duquette
Liam Foley
Ali'i Gibbs
Micheal Gregory
Shaina Keough
Hannah Logue
Corey McCall
Jade Miller
Isabella Mohammed
Sean Monteith
Alexander Nappo
Anastasia Orel
Arushi Palta
Sophia Park
Hanumali Rina
Sophia Saleeby
Fatima Salman
Finley Triano

HONORS STAFF

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Dr. Anna Bonta Moreland

Assistant Director
Emmie Brown

Program Assistant
Christine Ciocco

Postdoctoral Fellow
Dr. Evelyn Boydem

Graduate Assistants
Ally Duvak, Sadie Bowman

Director of Program Operations
Catherine Ricketts

Program Coordinator
Jaime Haughton

Assistant Teaching Professor
Dr. Terence Sweeney

Thesis Faculty Instructor
Dr. Brett Wilmot

SPECIAL THANKS

TUTORS

Dr. Allyson Levin
Dr. Benjamin Sachas*
Dr. Bill Cowen
Dr. Billie Murray
Dr. Camille Burge*
Dr. Cera Murtagh
Dr. Daniel Kraut
Dr. Deena Weisberg
Dr. Drew McLaughlin
Prof. Eugene McCarraher
Dr. Farshid Baghai
Dr. Jennifer Palenchar
Dr. John Schmidt
Dr. Joseph Comber
Dr. Megan Povelones
Dr. Michele Marcolongo
Dr. Muhammad Quadri
Dr. Nicholas Miller
Dr. Patrick Markey
Dr. Susannah McMonagle

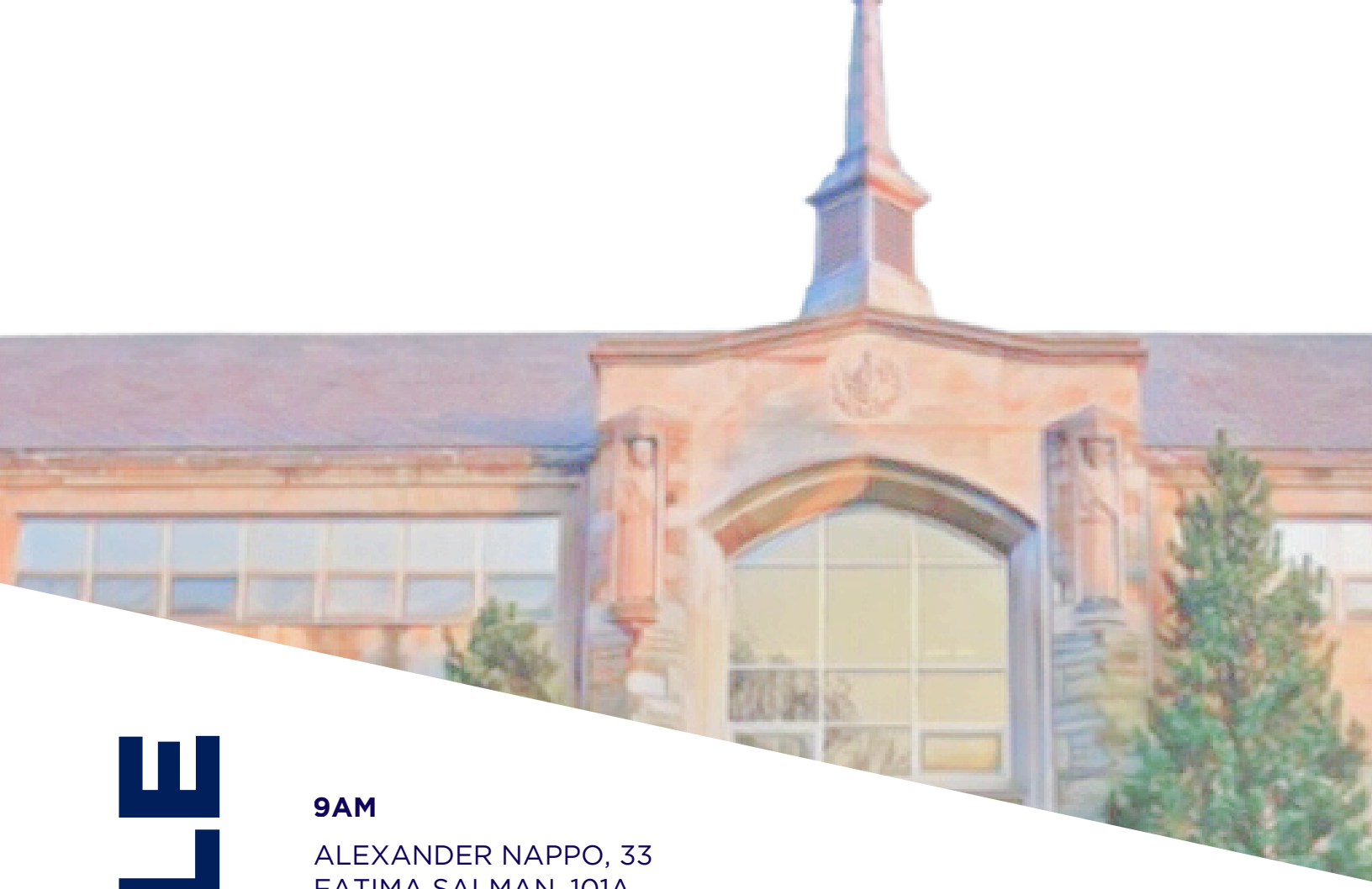
*TUTOR FOR MULTIPLE STUDENTS

ALUMNI MENTORS

Adam Vincent
Dr. Alan Bodnar
Andrew Donofrio
Dr. Angela Allen
Christian Ostrowski
Daniella Maniscalco
Dr. Elissa Carney
Emma Guilbault
Hilary Seith
Dr. Jennifer PeeksMease
Jennifer Silva
Dr. Jessica Swobado
Jill Toscano
Dr. Joanna Galati
Dr. Jose James
Katya Sajovec
Dr. Kevin Fosnocht
Dr. Liz Bell-McClure
Marissa Blum
Mary Marchal
Sachin Shah
Tommy Destefanis

READERS

Dr. Ashley Pattwell
Mr. Charles Francisco
Dr. Jesse Couenhoven
Dr. John Harles
Dr. John Harles
Dr. Joseph Toscano
Dr. Martina Ferrari



SCHEDULE

9AM

ALEXANDER NAPPO, 33
FATIMA SALMAN, 101A

10AM

JADE MILLER, 33
ANASTASIA, 101A

12PM

GRAYSON BROOKS, 33
ALI'I GIBBS, 101A
MICHEAL GREGORY, 103

1PM

THOMAS BORK, 33
ANTONIO CORRETJER, 101A
LIAM FOLEY, 101B
SEAN MONTEITH, 103

2PM

JAIME DUQUETTE, 33
ISABELLA MOHAMMED, 101A
HANNAH LOGUE 103
SHAINA KEOUGH, 101

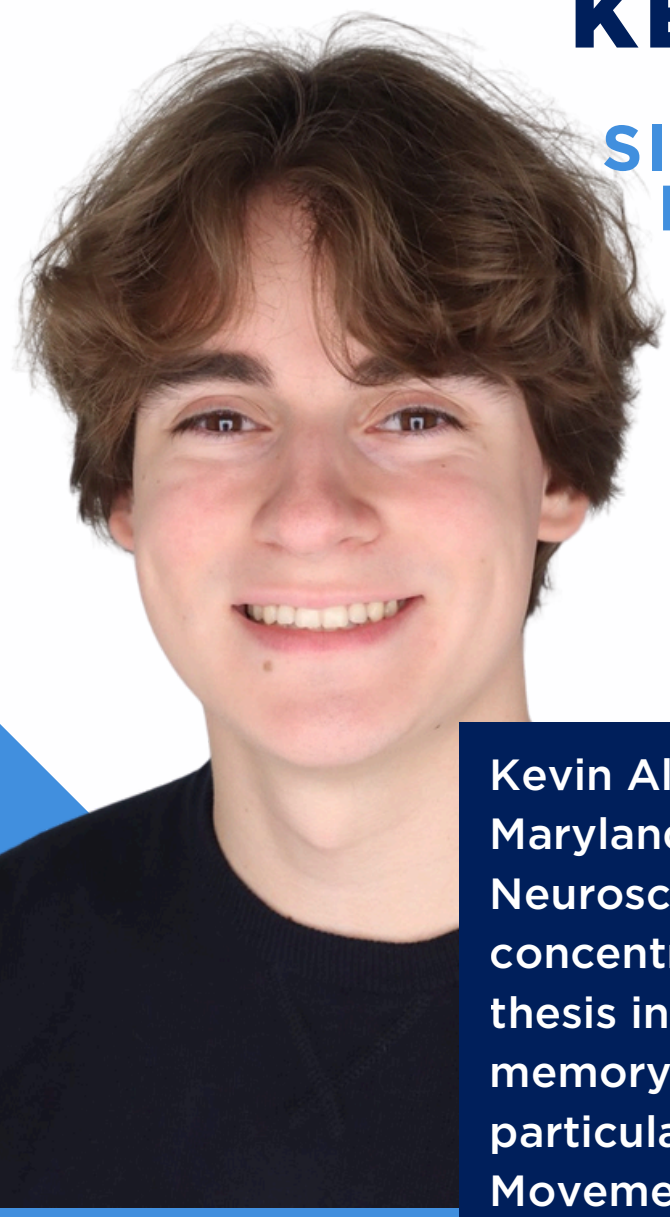
3PM

KEVIN ALDRIDGE, 33
ARUSHI PALTA, 101A
FINLEY TRIANO, 103

4PM

*RINA HANUMALI, 33
COREY MCCALL, 101A
SASSY SALEEBY, 103

*SENIOR THESIS II



KEVIN ALDRIDGE

Sleep Pattern Effects on Pigeon Memory Ability

Major(s): Cognitive & Behavioral Neuroscience
Tutor: Dr. Muhammad Qadri
Alumni Mentor: Dr. Joanna Galati (‘00)

Kevin Aldridge is a senior from Bethesda, Maryland, majoring in Cognitive and Behavioral Neuroscience with a minor in Psychology and a concentration in Medical Humanities. His honors thesis investigates how sleep quality affects memory performance in pigeons, with a particular focus on the roles of REM (Rapid Eye Movement) sleep, sleep fragmentation, and sleep duration. Using operant chamber memorization tasks, his research explores how different sleep patterns influence cognitive function and memory consolidation. Through this work, Kevin hopes to contribute to a deeper understanding of the relationship between sleep and memory. Following graduation, he plans to take a gap year working at Vanderbilt University Medical Center to gain patient care experience before pursuing admission to a Physician Assistant program.

THOMAS BORK

Comparing the Effects of Selective Serotonin Reuptake Inhibitors and Monoamine Oxidase Inhibitors on Depression-like Behavior in Low-Serotonin Mice



Major(s): Cognitive & Behavioral Neuroscience, Theology & Religious Studies
Tutor: Dr. Benjamin Sachs
Alumni Mentor: Christian Ostrowski (‘21)

Thomas is a senior from Nashville, Tennessee, pursuing majors in Cognitive and Behavioral Neuroscience and Theology and Religious Studies. His thesis investigates the effects of the selective serotonin reuptake inhibitor (SSRI) fluoxetine and the monoamine oxidase inhibitor (MAOI) selegiline on anhedonia, stress coping, and behavioral inhibition in tryptophan hydroxylase 2 (R439H) knock-in mice. By examining these behavioral outcomes, his research seeks to advance understanding of serotonin’s role in psychiatric illness. The thesis also investigates hippocampal neurogenesis as a potential neurobiological mechanism underlying drug-induced behavioral differences. Motivated by arguments for expanded use of MAOIs in treatment-resistant depression, Thomas’s research reflects his broader interest in psychopharmacology and the neurobiological mechanisms of psychiatric disorders. He joined Dr. Sachs’s lab through the Match Research Program for First-Year Students in Spring of 2024 and has continued his research in the lab throughout all four years of his undergraduate career. In the summer of 2026, he furthered his research experience through a Villanova Undergraduate Research Fellowship. Following graduation, Thomas plans to pursue a PhD in neuroscience, with the goal of building a career in research.

GRAYSON BROOKS

Hardening at the Centre: Radical-Right Threat and Mainstream Immigration Rhetoric in Britain and Ireland



Major(s): Political Science & Economics
Tutor: Dr. Cera Murtagh
Alumni Mentor: Danielle Maniscalco (‘05)
Reader: Dr. John Harles

Grayson Brooks is a senior in the Honors College and College of Liberal Arts and Sciences, double majoring in Political Science and Economics. Originally from New Jersey and raised in Cleveland, Ohio, he is the son of Jen and Peter Brooks. His academic interests lie at the intersection of politics and economics, with a particular focus on comparative politics, immigration policy, and macro- and microeconomics. Outside the classroom, Grayson served as Vice President of Philanthropy for his fraternity, leading charitable initiatives for Brandon Strong, Andrew’s Army, and the American 9/11 Foundation. He also helped raise $18,000 through a partnership with PinkAid to support breast cancer patients. A lifelong sports fan and dedicated supporter of the Cleveland Browns, he also enjoys international travel, legal dramas, and true crime stories. Grayson’s interest in immigration policy developed during a semester abroad in Barcelona, where he researched human rights violations at the borders of the European Union. Inspired by that experience and his travels, his senior thesis examines when mainstream political parties shift their immigration rhetoric in response to far-right nationalist challengers. Working with Dr. Cera Murtagh, he compares mainstream party responses in the United Kingdom and Ireland to explore how political competition shapes discourse on immigration. After graduating in May 2027, Grayson plans to attend law school and pursue a career in international politics.

ANTONIO CORRETJIER

ZC3H8 Influence of the Oncogenic Phenotype: Driving the Epithelial-Mesenchymal Transition



Major(s): Biology
Tutor: Dr. John Schmidt
Alumni Mentor: Dr. Jose James (‘09)

Antonio Corretjer López is a pre-med Biology major with minors in Psychology and Spanish from Caguas, Puerto Rico. In his free time, he enjoys the beach, working out, playing tennis, and eating good food. He is passionate about environmental protection and stays actively involved in his community through volunteering. For his research project, Antonio is examining epithelial-mesenchymal transition markers, such as E-Cadherin and N-Cadherin, to differentiate between aggressive and non-aggressive mouse mammary cancer cell lines. He is also using various microscopy techniques to capture morphological traits that support his findings, with the goal of deepening understanding of how cancer develops and functions. Looking ahead, he aspires to pursue a career in medicine and specializes in physical medicine and rehabilitation, helping patients recover from injury and improve their quality of life.



JAMIE DUQUETTE

Understanding Musculoskeletal Vulnerability: The Interplay of Genetics, Hormones, and Lifestyle

Major(s): Comprehensive Science

Tutor: Dr. Joseph Comber

Alumni Mentor: Dr. Kevin Fosnocht

Jamie is a comprehensive science major from Pittsfield, MA. On campus she has served as a member of the comprehensive science executive board and is involved in intramural sports. Sports have been a part of her life since she was young, and her thesis builds on this interest. Her thesis investigates why individuals exposed to similar physical demands can experience different musculoskeletal outcomes with particular attention to bone fractures and ligament tears. Specifically, she is examining how genetic predisposition, hormonal status, and environmental or lifestyle factors interact to influence tissue strength, resilience, and injury risk. After graduation, she plans to attend an accelerated nursing program and hopes to eventually pursue a career as a nurse practitioner.



LIAM FOLEY

Algorithms and Affective Polarization: A Focus Group Study

Major(s): Political Science
Tutor: Dr. Camille Burge
Alumni Mentor: Jennifer Silvi ('04)

MLiam Foley is a political science major at Villanova University, with minors in history and humanities. He is pursuing a career in public service, with academic interests in geopolitics, democratic development, and American political culture. He studied political science abroad at Trinity College Dublin, deepening his global perspective. He writes "Geopolitics Today," an op-ed column for Villanova's student newspaper, and previously interned in the Special Victims Unit of the Delaware County District Attorney's Office.

ALI'I GIBBS

Oh, the Horror: How Past Exposure to Unreal Media



Major(s): Psychology
Tutor: Dr. Deena Weisberg
Alumni Mentor: Dr. Angela Allan ('08)
Reader: Charles Francisco

Ali'i Gibbs is a senior Psychology major at Villanova University. Her honors thesis examines how prior familiarity with unrealistic media shapes viewer immersion and engagement with horror. Ali'i conducts her research in Dr. Deena Weisberg's Scientific Thinking and Representation (STAR) Laboratory and plans to continue her research journey through a master's program after Villanova.

MICHEAL GREGORY



Instilled Hunger: The American Shift into Cyclically Forced Market Participation

Major(s): Political Science & History

Tutor: Prof. Eugene McCarraher

Alumni Mentor: Mary Marchal ('03)

Michael Gregory is a Senior Villanovan, majoring in Political Science & History, from Florence, South Carolina. His research examines the relationship between economic insecurity, government responsibility, and the meaning of freedom in American society. His thesis explores the historical shift from New Deal and Great Society social protections toward neoliberal economic policies, examining how access to necessities such as food, healthcare, housing, and financial stability has increasingly become an individual responsibility. Through this research, he investigates how material insecurity shapes individual autonomy and sustains participation in modern economic systems.

RINA HANUMALI

Investigating Cofactor Specificity in Pseudomonas putida 3-Hydroxybutyrate Dehydrogenase



Major(s): Biochemistry, Honors Medical Humanities
Tutor: Dr. Jennifer Palenchar
Alumni Mentor: Tommy DeStefanis (‘23)

Rina is a biochemistry student at Villanova University who is originally from Scranton, Pennsylvania. Her senior thesis focuses on investigating cofactor specificity in the enzyme 3-hydroxybutyrate dehydrogenase (HBDH) from Pseudomonas putida by using site-directed mutagenesis, protein purification, and enzyme kinetics to understand how structural features influence the enzyme’s ability to utilize NADH or NADPH. This research is motivated by comparisons to parasitic trypanosome enzymes that display unique dual-cofactor usage, with potential implications for diseases like Chagas disease and African sleeping sickness. Outside of Dr. Palenchar’s laboratory, she enjoys playing tennis, practicing Indian classical dance, and baking. After graduating from Villanova University in December, she will attend medical school, connecting biochemical research with improving patient care.

SHAINA KEOUGH

Between Mission and Market: Race, Class, and the Common Good in U.S. Higher Education

Major(s): Sociology, Peace, & Justice

Tutor: Dr. Billie Murray

Alumni Mentor: Dr. Jennifer PeeksMease (‘00)



Shaina Keough is a Sociology and Peace & Justice double major from Richmond, Vermont. Her thesis examines how economic, political, and social pressures shape who universities serve and whether their practices reflect their stated missions and values. She uses Villanova University as a case study. After graduating, Shaina plans to work in the civil rights field before attending law school.

HANNAH LOGUE

Sorry, Not Sorry: The Efficacy of Moral Repair in Corporate Crisis Communication



Major(s): Communication, Public Relations & Advertising

Tutor(s): Dr. Allyson Levin, Dr. Bill Cowen

Reader: Dr. Jesse Couenhoven

Alumni Mentor: Hilary Seith (‘16)

Hannah Logue is a Senior Honors Communication Major with a Public Relations and Advertising Concentration and a minor in political science from Lancaster, Pennsylvania. Her thesis combines crisis communication scholarship and theological and philosophical perspectives on forgiveness in relation to corporate apologies. Through a variety of forgiveness frameworks, her thesis aims to understand the efficacy of brand apologies most aligned with forgiveness principles compared to other image restoration tactics. Hannah hopes to work in Public Relations after graduation.



COREY MCCALL

Examining the Impact of Hyperdopaminergia on Molecular Adaptations to Exercise in the Nucleus Accumbens

Major(s): Cognitive & Behavioral Neuroscience

Tutor: Dr. Benjamin Sachs

Alumni Mentor: Dr. Liz Bell-McClure ('07)

Corey is a Cognitive & Behavioral Neuroscience major with minors in Psychology and Criminology, and concentrations in an Honors Thesis and Medical Humanities from Jersey City, NJ. In his thesis, he investigates how exercise influences gene expression in dopamine transporter knockout (DAT-KO) mice to better understand the molecular mechanisms underlying exercise-induced adaptations in the brain. Outside of academics, he is involved in the New Student Orientation Program, serves as the Tour Coordinator of Blue Key, and works in the Office of Undergraduate Admission as the Head Admission Assistant and the University Career Center as a Peer Career Coach. Following graduation, Corey plans to pursue a doctorate in Clinical Psychology and become a forensic psychologist.

JADE MILLER

Beyond the Mitochondrion: Investigating the Role of TbDLP Phosphorylation in Organelle Regulation in Trypanosoma brucei

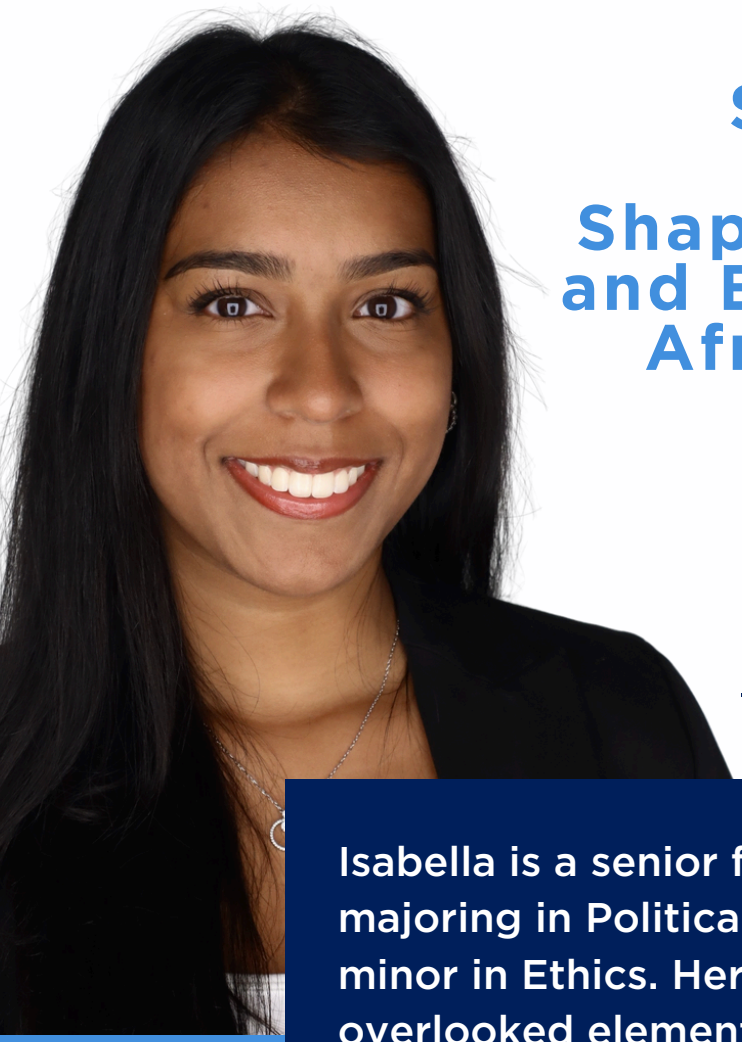


Major(s): Biochemistry
Tutor: Dr. Megan Provelones
Alumni Mentor: Emma Guilbault ('22)

Jade Miller is a Pre-Pharmacy Honors Biochemistry major from West Philadelphia, Pennsylvania, pursuing minors in Spanish Language and Communications. As an undergraduate researcher in the Povelones Laboratory, Jade studies Trypanosoma brucei, the parasite responsible for African sleeping sickness. Her current research focuses on TbDLP, a dynamin-like protein involved in organelle structure and division, with particular emphasis on how phosphorylation may influence its function and impact the morphology of mitochondria and glycosomes in T. brucei.

Following graduation, Jade plans to attend pharmacy school to earn a PharmD/MS and pursue a career in oncology pharmacy and pharmaceutical drug development. Beyond her academic and research pursuits, she serves as President of the National Society of Black Women in Medicine, is a member of Delta Sigma Theta Sorority, Inc., works as a Blue Key tour guide, and is employed as a certified pharmacy technician at Friends Hospital. In her free time, Jade enjoys exploring new cultures and recently studied abroad in Cádiz, Spain.

ISABELLA MOHAMMED



Bound by Race, Separated by Origin: How Ethnic Origins Shape Political Attitudes and Behaviors Across the African Diaspora in the United States

Major(s): Political Science & Philosophy

Tutor: Dr. Camille Burge

Alumni Mentor: Adam Vincent ('16)

Isabella is a senior from Long Island, New York, majoring in Political Science and Philosophy with a minor in Ethics. Her thesis concerns an often overlooked element of American politics, asking how the politics of Black Americans, Black Caribbeans, and African immigrants differ. Despite sharing a racial category, their unique experiences construct their political attitudes and behaviors on specific policy issues. Using current data from the Collaborative Multiracial Post-Election Surveys, she examines when a shared sense of racialized group consciousness unites people and when ethnic origin divides them. Ultimately, looking inside Black America, this research examines how several identity factors shape relationships with politics. After graduating, Isabella plans to attend law school, hoping to continue pursuing questions of identity and representation in a legal career.

SEAN MONTEITH

The Public Sphere in Palestine and Cyprus



Major(s): Philosophy and Cultural Studies
Tutor: Dr. Farshis Baghai
Reader: Dr. Martina Ferrari
Alumni Mentor: Dr. Jessica Swoboda (‘15)

Sean Monteith is a senior from Pitman, New Jersey who is pursuing majors in Philosophy and Cultural Studies (GIS). His thesis asks how a public sphere is formed and experienced in areas with contested borders, with a focus on Palestine and Cyprus. While the public sphere is traditionally theorized as a sphere in society that mediates between the state and private affairs, its status in these two contexts requires special attention. As a form of community that generally aspires to have no exclusionary membership criteria, the public sphere remains destabilized in Palestine and Cyprus by different forms of displacement and occupation. Sean plans to investigate these differences in two major steps. First, with a phenomenological interpretation of the public as it appears in texts of literary fiction from each context. Second, with an analysis of the conceptions of the public that are implied in discourses about those texts. Sean is currently in the process of applying to graduate programs to continue his study of philosophy.



ALEXANDER NAPPO

Maximizing Systolic Length on Hyperbolic Punctured Spheres

Major(s): Mathematics
Tutor: Dr. Nicholas Miller
Alumni Mentor: Andrew Donofrio (‘21)

Alex Nappo is a senior at Villanova University from West Harrison, New York. He is majoring in mathematics and aspires to become a mathematics professor. Alex is working in hyperbolic geometry under the direction of Dr. Nicholas Miller, researching whether non-arithmetic surfaces maximize systolic length among hyperbolic punctured spheres, and aiming to use techniques from Teichmüller theory and combinatorial topology. Outside of class, Alex enjoys jamming on his guitar, playing sports with friends, and, of course, doing math. He also serves as Co-President of the Villanova Food Recovery Network.

ANASTASIA OREL

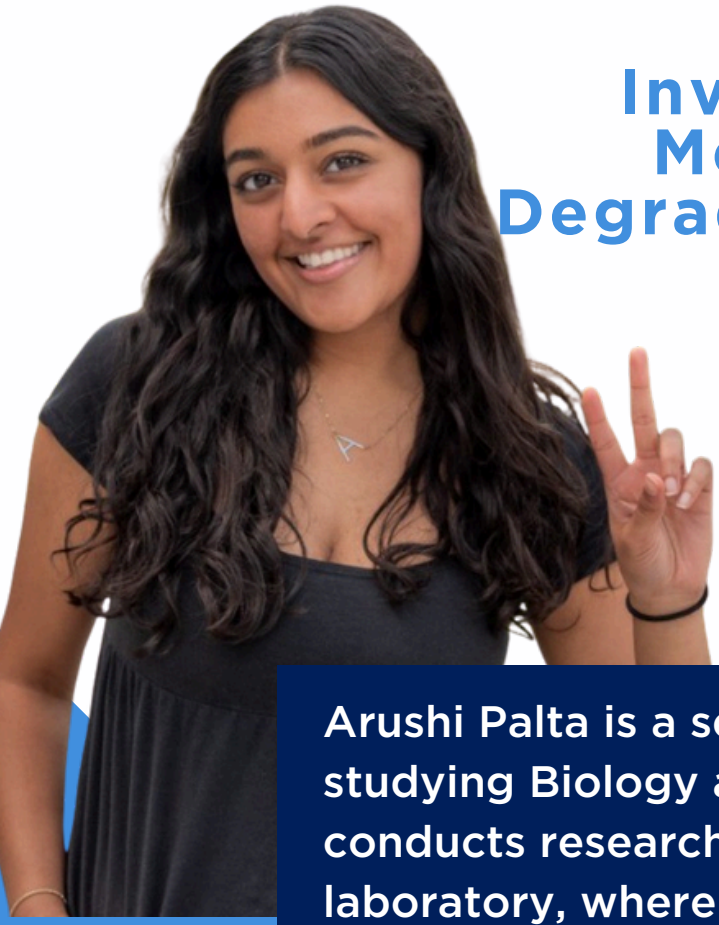
Interpersonal Dynamics in Human-AI Decision Making



Major(s): Psychology
Tutor: Dr. Patrick Markey
Reader: Dr. John Kurtz
Alumni Mentor: Dr. Alan Bodnar (‘69)

Anastasia is a senior Psychology major pursuing a Statistics minor and a concentration in Russian Area Studies. Throughout their undergraduate career, they have contributed to research on neurogenesis in mice, interpersonal perceptions of Dark Triad personality traits, and the role of interpersonal complementarity in investor reactions to corporate earnings calls. This year, they designed and launched the experiment for their Senior Honors Thesis and are currently conducting participant data collection. Following graduation, they hope to pursue graduate training in clinical psychology and contribute to research focused on psychopathology and mental health.

ARUSHI PALTA



Investigating Midnolin-Mediated Proteasomal Degradation Using a Yeast Model System

Major(s): Biology
Tutor: Dr. Daniel Kraut
Alumni Mentor: Marissa Blum (‘99)

Arushi Palta is a senior at Villanova University studying Biology and Medical Humanities. She conducts research in Dr. Daniel Kraut’s laboratory, where she investigates the molecular mechanisms of proteasomal protein degradation, with a particular focus on the role of Midnolin. Her Honors thesis combines her interests in molecular biology and medicine, exploring how fundamental scientific research contributes to our understanding of human health and disease. Outside the laboratory, Arushi is passionate about clinical medicine and hopes to pursue a career as a physician assistant, integrating her research background with compassionate, patient-centered care.

PRESENTING ON DECEMBER 10TH, AT 2PM IN ROOM G42



SOPHIA PARK

Investigating BPG-Dexamethasone Localization for Osteoarthritis Treatment

Major(s): Biology & Humanities
Tutor: Dr. Michele Marcolongo
Alumni Mentor: Sachin Shah ('95)

Sophia Park is a Biology and Humanities major from Baltimore, Maryland, with aspirations to become a physician-scientist. Since her first year of college, she has been actively involved in research, combining her interests in scientific discovery and patient care. Outside of academics, she enjoys sewing, hiking, cooking, and spending time with her foster cat, Dolly. Following graduation, Sophia will join the Balko Lab at Vanderbilt Ingram Cancer Center, where she will study cancer immunology and mechanisms of drug resistance in HER2-positive breast cancer. Currently, she conducts research in the Marcolongo Lab, which focuses on developing innovative therapies for osteoarthritis. Her research centers on a novel biomimetic proteoglycan (BPG) therapy designed to restore cartilage by replenishing proteoglycan levels lost during disease progression. In addition to its regenerative potential, BPG has shown promise as a drug delivery vehicle for dexamethasone, an anti-inflammatory steroid commonly used to manage osteoarthritis symptoms. Sophia's project investigates the localization of BPG-dexamethasone within cartilage tissue to better understand its therapeutic effects and potential to improve drug delivery to chondrocytes. Through this work, she hopes to contribute to the development of more effective treatments for osteoarthritis and other chronic diseases.

SOPHIA SALEEBY

Developing and validating a Novel Gamified Instrument to Assess Spanish Proficiency



Major(s): Biology, Spanish Language & Literature
Tutor: Dr. Drew McLaughlin
Reader: Jospeh Toscano
Alumni Mentor: Dr. Elissa Carney (‘01)

Sophia is a senior from St. Louis, Missouri, pursuing majors in biology and Spanish language and literature with an Honors concentration in medical humanities. She has been a member of the Word Recognition and Auditory Processing (WRAP) lab since her sophomore year and is completing her thesis under the guidance of Dr. Drew McLaughlin and Dr. Joseph Toscano. While enjoying all facets of speech perception and language acquisition, Sophia is particularly interested in second language learning and multilingualism. Drawing on her Spanish major, Sophia is developing a gamified instrument to assess Spanish proficiency in language learners for her thesis project. She also uses her language skills outside of the classroom by volunteering weekly as an English for Speakers of Other Languages (ESOL) assistant teacher with the Community Outreach of Villanova. Following graduation, Sophia plans to attend medical school and eventually become an otolaryngologist (ENT) to help patients aPected by speech and language disorders.

FATIMA SALMAN

Examining the Effects of Amphetamine and Stress on Object Recognition in Mice



Major(s): Cognitive & Behavioral Neuroscience & Humanites

Tutor: Dr. Benjamin Sachs

Alumni Mentor: Katya Sajovec (‘21)

Fatima Salman is a Cognitive & Behavioral Neuroscience and Humanities double major with minors in Psychology and Medical Humanities from Denver, CO. She has been a member of Dr. Benjamin Sach’s lab since Fall of 2025, where she has studied hippocampal neurogenesis of mice in various stress conditions. Fatima has also conducted mouse research at UNC Chapel Hill, examining the neural architecture of activation in behaviorally divergent mice strains following cocaine exposure using c-Fos. Her thesis aims to understand the interactive effects of amphetamine exposure and stress on the learning capabilities of mice. Following graduation, Fatima plans to continue conducting research and later attend medical school.

FINLEY TRIANO

Stopping the Scroll: Testing the Ohanian Source Credibility Triad to Predict Consumer Retention and Purchase Intention in Short-Form Video



Major(s): Communication - Public Relations & Advertising
Tutor: Dr. Susannah McMonagle
Reader: Dr. Ashley Pattwall
Alumni Mentor: Jill Toscano (‘05)

Finley Triano is a Communication major with a concentration in PR & Advertising and a minor in Marketing. She has worked closely on both the front and back end of influencer marketing and content creation through collegiate ambassador positions with brands like Alani Nutrition, Windsor Stores, Princess Polly, and Bubble Skincare, and currently serves as the official Influencer Marketing Intern at luxury, Philly-based sleepwear brand Printfresh. Finley is curious about what aspects of influencer content drive consumer retention and purchase conversion across creator following tiers. Her thesis focuses on analyzing short-form video across Instagram Reels and TikTok, utilizing the source credibility model to determine what drives authentic engagement between consumers and creators.