

APRIL 2024

# STEM EXPLORATIONS

Official Newsletter of the STEM Center

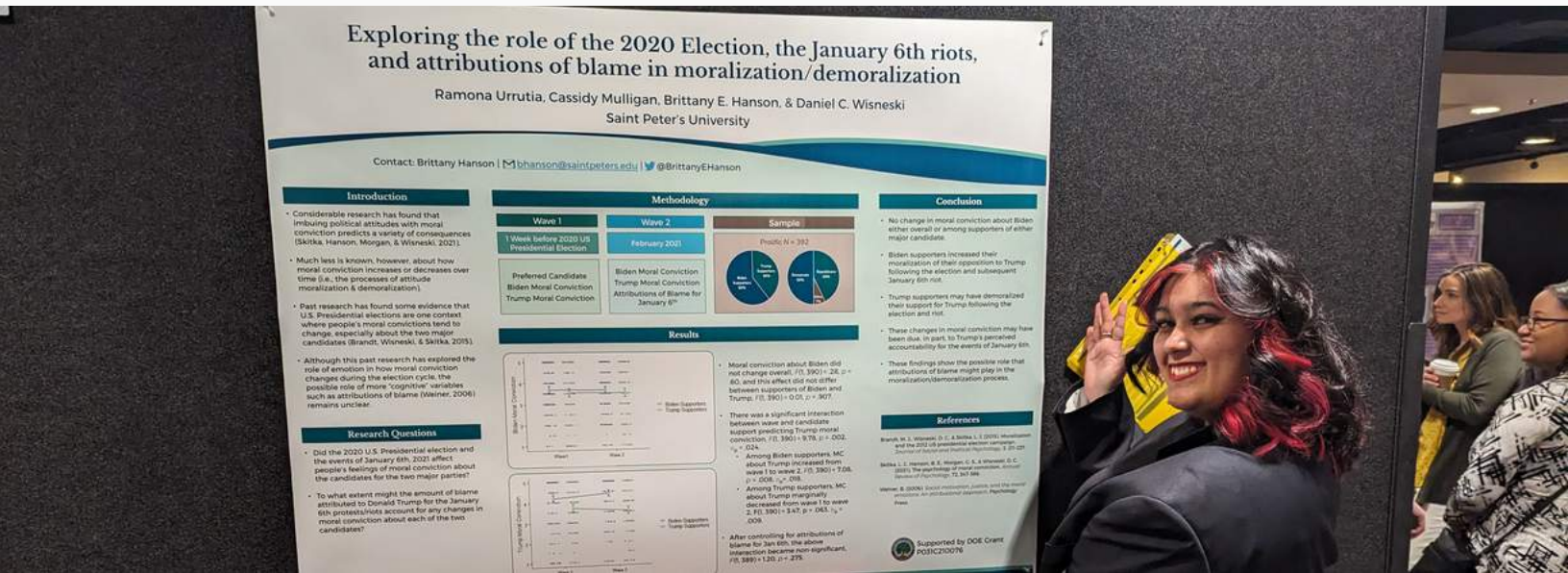
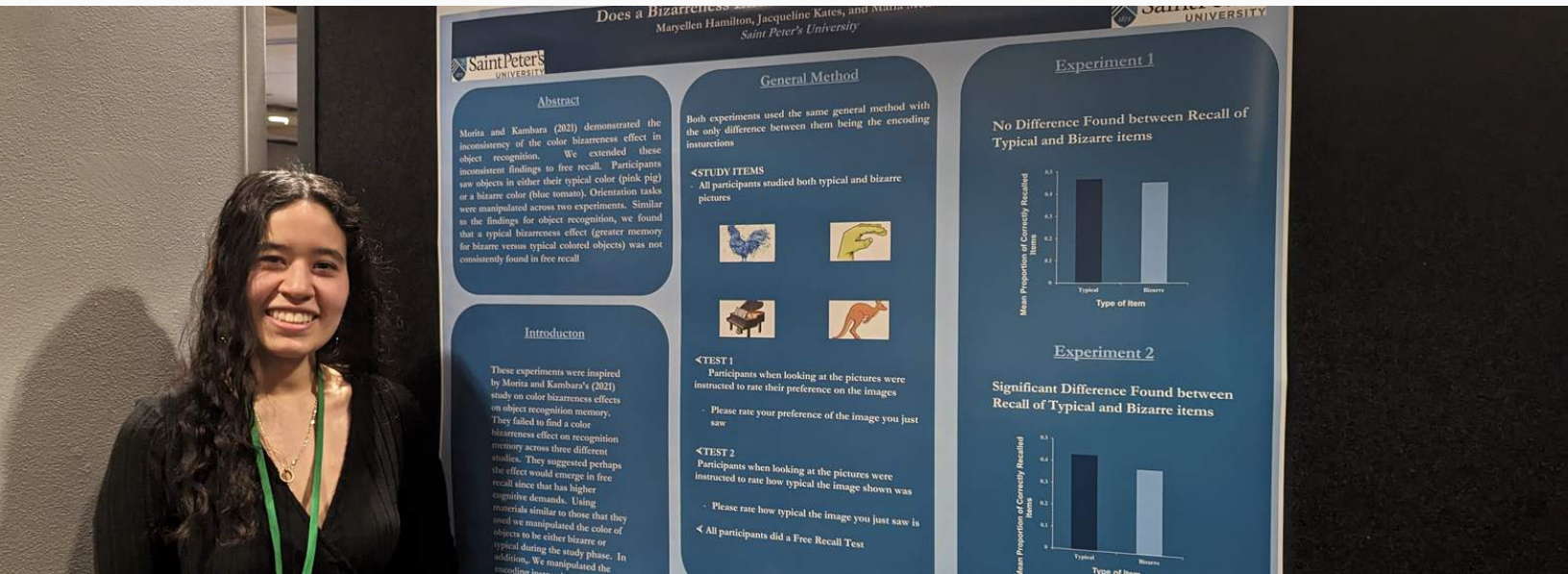
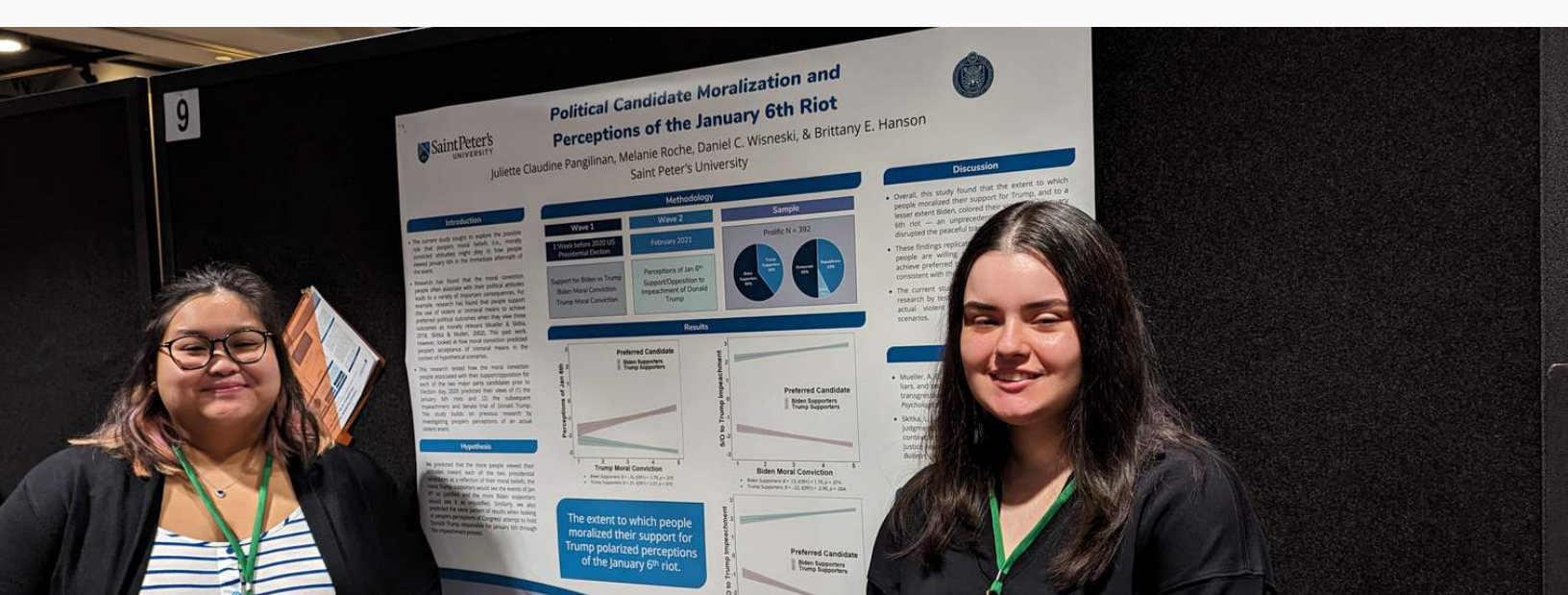
## STEM Events Recap

The Psychology Department attended the Eastern Psychological Association's Annual Meeting in Philadelphia from 2/29 to 3/2. Attendees included Catherine Alvarado '24, Maria Medrano '26, Juliette Pangilinan '24, Jessica Jazmin Reyes '24, Melanie Roche '24, Ange-Marguerite Teko-Agbo '25, Nayeli Torres '24, and Ramona Urrutia '25, Dr. Hanson, Dr. Wisneski, Dr. Bubka, Dr. Hamilton, and Dr. Feinberg.

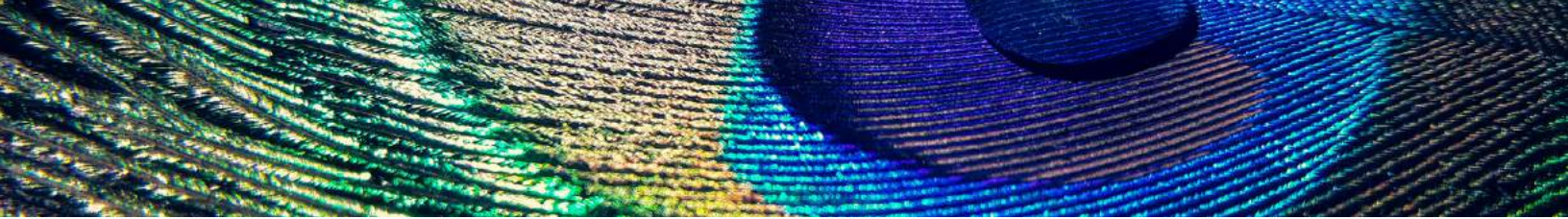


Four students presented posters at the conference. Ramona Urrutia presented a poster titled "Exploring the Role of the 2020 Election, the January 6th Riots, and Attributions of Blame in Moralization/Demoralization."

Juliette Pangilinan and Melanie Roche presented a poster entitled "Political Candidate Moralization and Perceptions of the January 6th Riot" and Maria Medrano presented a poster entitled "Does a Bizarreness Effect of Color Occur in Free Recall?"



In photo 1 to 3: Juliette Pangilinan, Melanie Roche, Maria Medrano, and Ramona Urrutia



Eight students (Dr. Laura Twersky research advisor) presented their research on the effects of microplastics at the 2024 The Independent Colleges and Universities of New Jersey (ICUNJ)- Undergraduate Research Symposium at Bell Laboratories, Holmdel, NJ on March 19th.

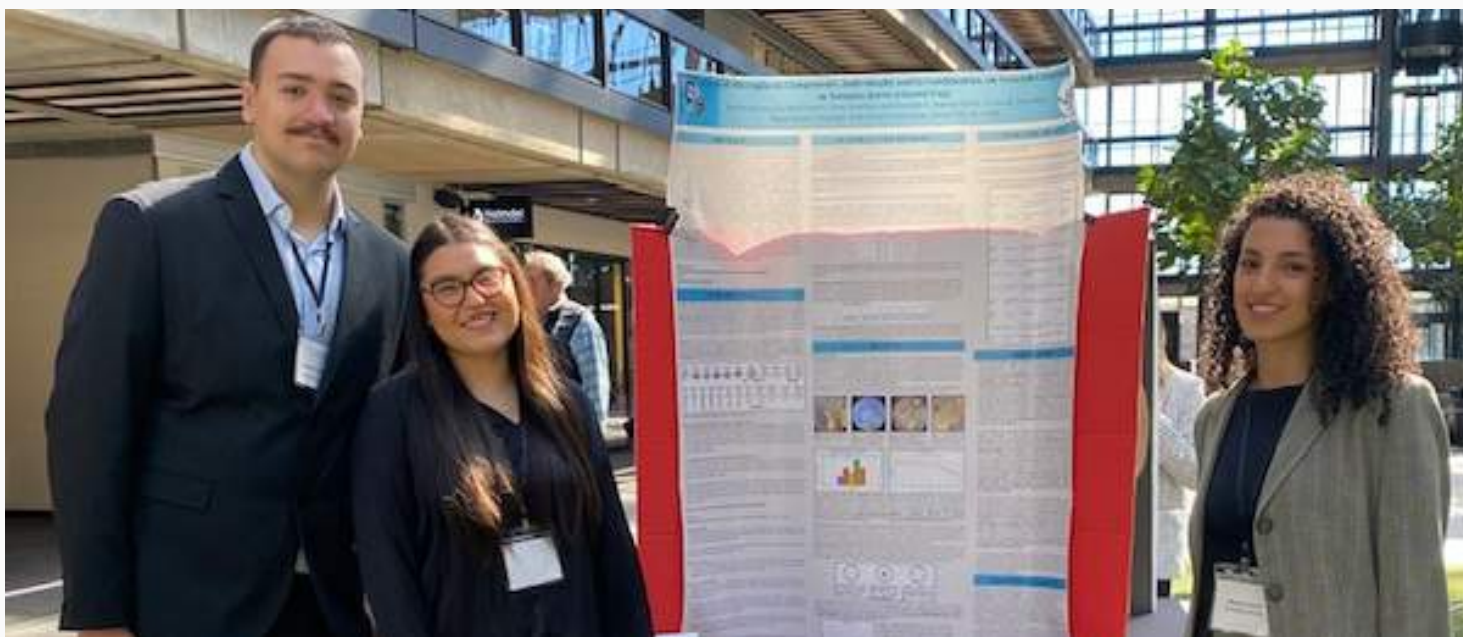
**Their presentations were entitled:**

Danilo Rocenovic '24, Katherine Sanchez '25 and Shereen Hanna' 25: “Effects of Microplastic Components , Individually and in Combination, on Neurodevelopment in *Xenopus laevis* (clawed frog)”

Barbara Munoz'25 and Carlos Duque Sanchez'25: “Effects of Selected Microplastics and Endocrine-disrupting Chemicals on the Cardiovascular System of *Xenopus laevis* (clawed frog)”

Kenia Castellanos'24: “The Effects of Polystyrene, Bisphenol A and Bisphenol S, Individually and in Combination, on Larval Amphibian Tail Regeneration”

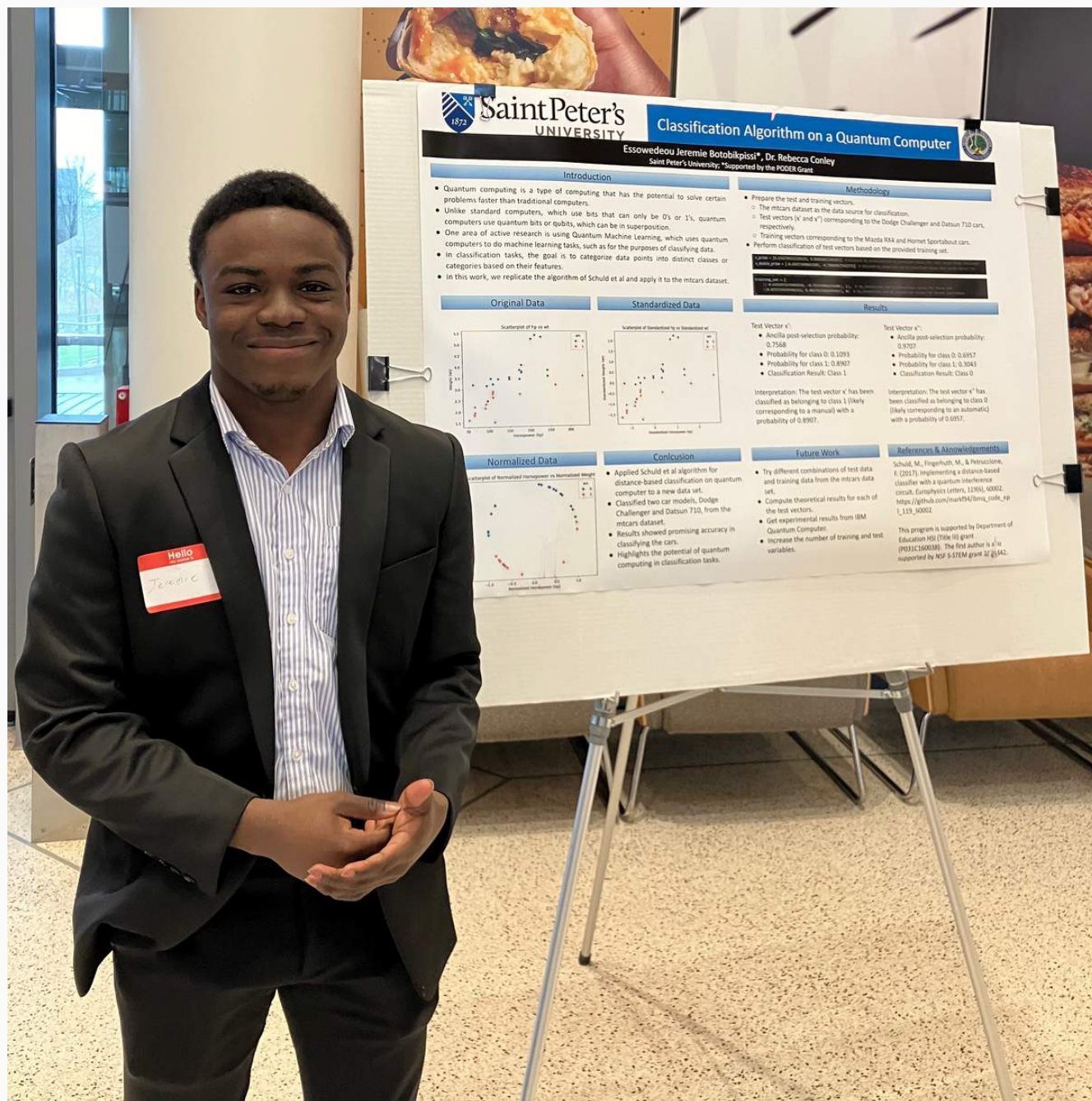
Hadia Iman'25 and Ratiba Megalla '25: “Effects of Microplastics/Endocrine Disruptors on Skeletal Development”



In photo L to R: Danilo Rocenovic, Katherine Sanchez and Shereen Hanna



Essowedeu Jeremie Botobikpissi presented a poster titled "Classification Algorithm on a Quantum Computer" at the joint Mathematical Association of America New Jersey Spring Meeting and Garden State Undergraduate Mathematics Conference held March 23, 2024 at Rowan University. Jeremie is a PODER Fellow and LEAPS Scholar, who is majoring in cyber security and minoring in mathematics. Dr. Rebecca Conley was his faculty mentor for the research.





## **STEM Students Spotlight**

**Barbara Munoz, Senior  
Biology**

*Recent Research Conducted:* Munoz recently conducted research on frog embryos to detect heart defects caused by micro plastics. The goal of this project was to determine micro plastics' potential harm to all species exposed to such pollution in their environments.



**What inspired you to choose this STEM major?**

My AP Biology high school teacher was very passionate in the study of life. This inspired me to choose the major and spread the same ideology.

**What are some of your academic achievements during your time at SPU?**

Despite the typical challenges associated with grades, a huge academic achievement for me was working toward lifting my GPA with an upward gradual trend.



**Barbara Munoz, Senior  
Biology**

**What are your goals/plans post graduation?**

Before setting foot into grad school, my goal is to go on vacation and relax. This is something I have not done in a while.

**What has prepared you for this new transition in your life?**

I want to say that my family and friends have helped me prepare. I have gone through many situations with them by my side. They kept me afloat, which lead me to where I am today.

**What advice would you give to students who are still in the early stages of their undergraduate program?**

My advice would be to always put in the work first and have fun later. It will be worth it every single time.



**Matthew Prothero, Alumni  
Computer Science**

*Recent Research Conducted:* For his honors thesis, Prothero conducted a research study on how the addition of ray tracing to video game graphics impacted overall user experience.

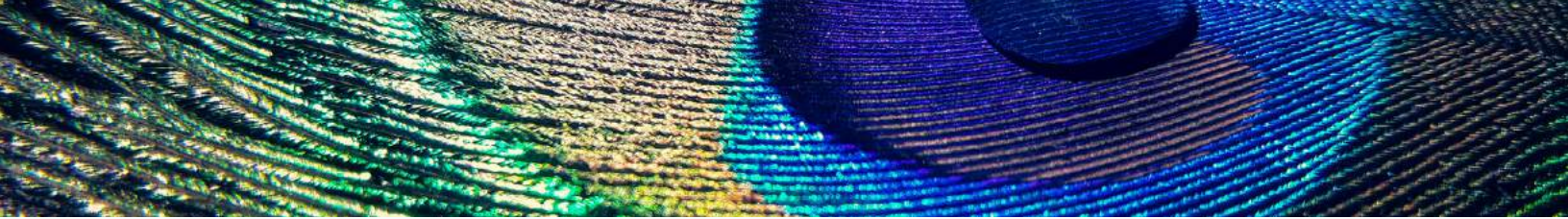


**What inspired you to choose this  
STEM major?**

I chose my major (Computer Information Systems) because I always had an interest in computers, and I learned a lot of troubleshooting techniques at a young age from my dad who works in I.T.

**What were some of your academic  
achievements during your time at  
SPU?**

During my time at school, I was awarded a Silver Academic Medal (for AY 20-21), inducted into the Upsilon Pi Epsilon Honor Society and inducted into the Most Noble Order of the Peacock. I also graduated with Honors this past December after giving my senior thesis.



**Matthew Prothero, Alumni  
Computer Science**

**What were some of the things you've done post-grad?**

I've accepted a full-time position at Horizon Blue Cross Blue Shield of New Jersey as an Infrastructure Analyst starting April 1st.

**What had prepared you for this new transition in your life?**

I took a lot of credited internships with the Computer Science Department to build up my skills and work experience. My role as a Lab Coordinator helped me get my internship with Horizon last summer.

**What advice would you give to students who are still in the early stages of their undergraduate program?**

My advice would be to try and get some kind of work experience as soon as possible. Start by doing something at the school like a work study or a credited internship, and then work your way up to an internship program at a company or in the public sector. For Computer Science students specifically, independent coding projects are also a great line item when building a resume.





**Maria Medrano, Sophomore  
Psychology**

*Recent Research Conducted:* Alongside Dr. Hamilton, Medrano worked on a study done on the bizarreness effect. Their project was on whether or not a bizarreness effect on color occurred in Free Recall. It was originally based on Morita and Kambara (2021) who demonstrated the inconsistency of the color bizarreness effect in object recognition. They extended these inconsistent findings to free recall.



**What inspired you to choose  
this STEM major?**

I think what inspired me to choose this major was my love and interest in all things psychological. It was always the most interesting career choice and was something I could see myself doing until I grew old. Being able to help people in a psychological way is so important, especially in this day and age where more cases of untreated mental illness are being used to view others in such a horrible light.



**Maria Medrano, Sophomore  
Psychology**

**What are some of your academic achievements during your time at SPU?**

During my time at SPU, I had the honor of helping Dr. Hamilton with a research project, which we ended up taking to the EPA convention in Philadelphia. It was there that I managed to meet with an old president of the Psi Chi organization, who talked with me about the up-and-coming convention and gave me some advice for graduate school. I've also managed to become the new up and coming President of the PRIDE Organization, which I hope is able to grow and flourish with the help of the community.

**What are your goals/plans post graduation?**

Post-graduation, I plan on going to graduate school, earning my PsyD, and becoming a Doctor of Psychology. I wish to become a Clinical Psychologist, working with both adults and adolescents battling mental health issues. Recently, I've also been looking into the forensic side of Psychology, though for right now, Clinical is my set path.

**What had prepared you for this new transition in your life?**

The thing that prepared me the most for this was my own research. I am, like most students, a first-generation student whose responsibility is to get my family ahead in life and make a name for myself. It was my mother's hardwork and constant sacrifice that always inspired me to try and get ahead. I knew that I couldn't just go into things blind, so I did my own research and reached out to certain university programs to gain more information. I knew I couldn't rely on others around me to answer.

**What advice would you give to students who are still in the early stages of their undergraduate program?**

I think the biggest piece of advice I could offer is to value the importance of making connections with your professors. Go to their office hours, email them, and ask them questions. Build a personal relationship with them so that when the time comes, you have excellent letters of recommendation and have the opportunity to help them with whatever research they may be participating in. They can provide you with many opportunities that you can use to succeed and may even introduce you to future employers.



# Note Taking Prep & Study Skills



**Round table discussion  
with fellow students, peer  
mentors, and tutors!**



**Monday, 8th April**

**12PM-1PM**

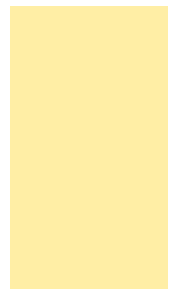
**STEM Center,**

**R.316 Pope Hall**

Discuss with our  
Peer Mentors  
and Tutors  
about Tips and  
strategies.

**OPEN TO ALL MAJORS!!**

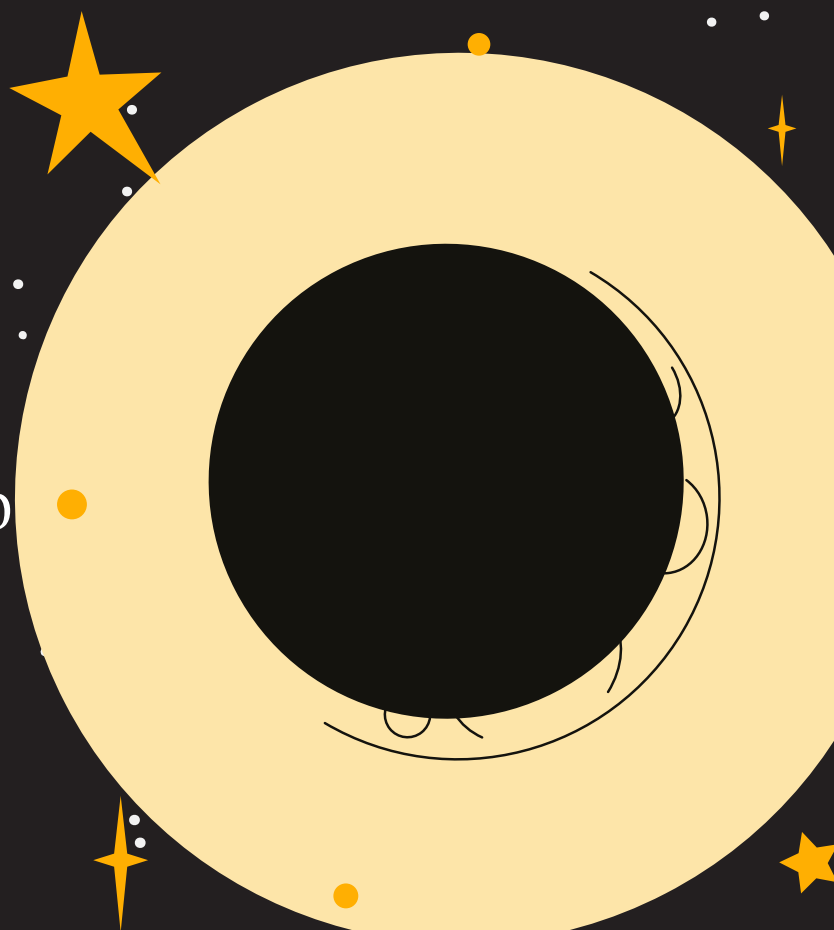
Please Scan QR Code to RSVP



Please join the STEM Center on “The Quad” Monday, April 8, 2024 at 2:50PM for a group gathering to view the 90% Solar Eclipse.



RSVP here to reserve and pick up a pair of glasses. You can pick up glasses at the STEM Center on the following days:  
Wed. 4/3- Fri. 4/5 from 8:30-3:30  
Mon. 4/8 from 8:30-12:30



**STEM-Poder Grant**  
DOE P031C210076



**STEM-Poder Grant**  
DOE P031C210076

# Paint and Meditate at STEM



To RSVP, please scan  
QR code



For questions/concerns, please  
contact Ms. Cristaly Argenal at  
[cargenal@saintpeters.edu](mailto:cargenal@saintpeters.edu) or call  
(201)-761-6375

**THURSDAY, APRIL 25, 2024**  
**12PM-1PM**  
**POPE HALL RM 316**

*Open to all majors!*

