

# Raymond Murray

(330) 307-9205; [rdm80@pitt.edu](mailto:rdm80@pitt.edu); Pittsburgh PA, 15213; LinkedIn: <https://tinyurl.com/2p98amyn>

---

## Education:

**Swanson School of Engineering, University of Pittsburgh** (Spring 2024)  
Bachelor of Science in **Bioengineering – Bioimaging and Signals**  
Minor in **Neuroscience**  
Cumulative GPA: **3.39**

## Relevant Coursework:

Biological Signals and Systems, Biomedical Applications of Signal Processing, Introduction to Neural Engineering, Quantitative Systems Neuroscience, Computer Applications in Bioengineering, Introduction to Neuroscience, Synaptic Transmission, Neurophysiology, Introduction to Biomedical Image Analysis, Introduction to Cell Biology I-II, Statistics, Introduction to Probability and Random Variables

## Skills:

**Software:** MATLAB, C, Python, Java, Microsoft Office, LaTeX

**Hardware:** LabQuest Mini, pH probe, Burette, Arduino UNO, ADALM1000, Circuit building, Soldering, SMD, Reflow Oven

**Other:** Working with non-human primates

## Engineering Projects:

**Undergraduate Research Assistant – Schwerdt Lab** (June 2022 – Present)

- Analyze chemical and behavioral data to make inferences about neurotransmitter function
- Construct circuits for eventual electrical chemical recording in non-human primates
- Present and participate in data analysis meetings with guidance from faculty and graduate student mentors

**Visceral Artery Locator** (Fall 2021 Semester)

- Expanded on a novel approach to aortic stent graft customization utilizing infrared light detection
- Developed a MATLAB application to visualize readings from ultrasonic distance sensor, gyroscope, and infrared photoresistor

## Research Projects / Awards:

**Summer Undergraduate Research Internship – Swanson School of Engineering** (April – August 2023)

- Received a \$4,000 grant to conduct research entitled “Dopamine Signaling in Monkey Striatum and Anticipatory Licking”
- Created novel MATLAB scripts for analysis of both behavioral and neurochemical data
- Wrote a two-page extended abstract for review by the SSOE Graduate Student Editorial Review Board

**Biomedical Engineering Society Annual Meeting Presentation** (October 2023)

- Wrote an abstract for the research project described above as was accepted by BMES for a poster presentation at the 2023 annual meeting
- Presented a research poster during the BMES 2023 annual meeting

