

# AZALEA SHILLINGTON



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azaleash.github.io



English & Français

Dual-discipline leader in physics and electrical engineering with experience in building and guiding effective teams to solve complex engineering and scientific challenges.

## Experience

Oct  
2025  
-

### **Filippini Lab UIUC, Research Assistant**

- Designed and fabricated PCBs and support circuitry for cryogenic readout systems for the Terahertz Intensity Mapper (TIM).
- Developed specialized test electronics for optical components in TIM, to ensure reliable operation at temperatures down to 4 Kelvin (liquid helium).

Aug  
2025  
-  
Dec  
2025

### **The Illinois Space Society, Avionics Engineer**

- Designing avionics for camera systems in high powered rocketry to attempt a rocket launch to reach the Karman line.
- Focused on PCB design that handles live data, telemetry, and in-flight events.

Jan  
2023  
-  
May  
2025

### **MachBusters Robotics, President**

- Led a team of 24-29 high school students through the full design, build, and competition cycle for complex, competitive robotics systems.
- Directed project timelines, resource allocation, and team dynamics to achieve challenging technical objectives.

Aug  
2024  
-  
Jan  
2025

### **Ohio State University Department of Astronomy, Research Mentee**

- Researched coronal heating mechanisms under the guidance of Prof. Sultana Nahar.
- Presented research findings in an oral presentation at ICMMS in Dahab, Egypt.
- Received Best Oral Presentation in Physical Sciences at ICMMS-6

June  
2024  
-  
Aug  
2024

### **CIERA Northwestern University, Research Mentee**

- Researched on variability in black hole binary accretion disks under Prof. Deepika Bollimpalli
- Analyzed complex simulation data using Python to predict astrophysical behaviors by analyzing local frequencies.

## Education



### **University of Illinois Urbana-Champaign**

Physics (B.S.) and Electrical Engineering (B.S.)

2025 - 2029



### **Sycamore High School**

Graduated Summa Cum Laude, top 5% of class, GPA 4.45 (weighted)

2021 - 2025

## Skills

Python, Java, Kotlin, Data Analysis, Computational Modeling, PCB Design, CAD, Project Management, Public Speaking, Academic Writing, Grant Writing

## Relevant Coursework

Mechanics, Electricity & Magnetism, Thermodynamics, Quantum Physics, Multivariable Calculus, Differential Equations, Introduction to Electronics