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## EDUCATION

### Massachusetts Institute of Technology (MIT)

Cambridge, MA

*Candidate for Bachelor of Science in Electrical Engineering and Physics*

May 2025

- Relevant Coursework: Power Electronics, Quantum Physics, Signal Processing

GPA: 4.8/5.0

## SKILLS

**Technical:** Python, CAD, Altium, MATLAB, Arduino, C++, PCBs, LTspice, PID Controls, MS Office, C, Assembly

**Language:** German (C2), Korean (B1), Spanish (B1), Vietnamese (A2)

## WORK EXPERIENCE

### MIT Department of Physics

Cambridge, MA

*Undergraduate Teaching Aide*

September 2022 – Present

- Facilitate collaborative environment in sections of 120 students by adjusting to different learning styles.
- Engage in further small group discussions on overlooked class content to establish thorough comprehension.
- Mentor peers in physics undergoing academic challenges using personal experience.
- Administer lab & demo instructions to promote a focus on hands-on physics exploration.

### Stuttgart University Program for Experiencing Research (SUPER)

Stuttgart, Germany

*Research Intern*

June 2023 – August 2023

- Modeled a PhD candidate supervisor's power cycling circuit in CAD to be used for device failure analysis.
- Designed and printed fully functional buck converter PCBs in Altium for power cycling tests.
- Operated power supplies & oscilloscopes in a robust power semiconductors lab to perform circuit measurements.
- Worked with precision mechanical machinery to manufacture PCBs, plexiglass layouts, and mount designs.

### MIT Department of Architecture

Cambridge, MA

*Undergraduate Researcher*

February 2022 – May 2022

- Integrated electrification research into a PV power cost analysis of an off-grid educational site in Sierra Leone.
- Acted as a branch between MIT Architecture students and the Sierra Leone contractor building the site.
- Simulated climate patterns, illuminance, and thermal comfort as a function of human variables over time.
- Modeled a strategic workflow to increase understanding of PV collection and DC inversion to AC.

## LEADERSHIP

### MIT-Germany Global Teaching Labs

Kaufbeuren, Germany

*Guest Teacher*

January 2024 – January 2024

- Designed lessons and exercises for classes of 20-30 students from grades 7-12 to prepare them for school exams.
- Delivered STEM lessons in technical English to deepen the second language proficiency of German adolescents.
- Adapted to the changing schedules of 8 high school teachers in physics, math, English, informatics, and robotics.
- Incorporated relevant research topics and live demonstrations to spark the interest of girls in STEM.

### Camp Kesem at MIT

Cambridge, MA

*Volunteer Coordinator*

November 2021 – Present

- Empower 200 campers aged 6-18 impacted by cancer as a counselor and role model at week-long camps.
- Design and present staff training modules to prepare 130 counselors in childcare, DEI, disability, and identity.
- Network with biotech companies, grant foundations, and alumni to garner speakers & corporate sponsorship.
- Generated \$160,000 in 2023 to fund annual summer camps for children affected by cancer in the family.

### MIT Lightweight Crew

Cambridge, MA

*Coxswain*

September 2021 – November 2022

- Executed coach's plans by delivering precise vocal directions, constantly facilitated team cohesiveness.
- Supervised boathouse maintenance procedures and instructed crew when coach was unavailable.
- Maximized potential of 4-8 rowers daily by pushing them at their physical boundaries.
- Anticipated necessary adjustments to weather alterations, river routes, and oncoming boat traffic.