

Lilly Chiavetta

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EDUCATION

Duke University, Durham, NC

Dec 2025

Master of Engineering in Electrical & Computer Engineering

Bachelor of Science in Electrical & Computer Engineering and Biomedical Engineering

GPA: 3.9/4.0

- Relevant Coursework: Robotics, Engineering Design & Communication, Data Structures and Algorithms, Microelectronics, Signals and Systems, Embedded Systems, Computer Architecture, Medical Robotics
- Honors & Awards: Chief Student Marshal (2024), Outstanding Teaching Assistant (2024), 1st place in HackDuke (2022 & 2023), Best Overall Robot Design (ECE Fundamentals- 2022)

PROFESSIONAL EXPERIENCE

Renesas Electronics, *Systems Engineering Intern*, Morrisville, NC

May 2024-Aug 2024

- Designed and simulated a schematic and PCB in Altium Designer for a TRIAC motor control embedded system to be used for both US and European power grids
- Designed a smart HVAC damper control algorithm and circuit with environment sensors and motor control

Renesas Electronics, *Applications Engineering Intern*, Morrisville, NC

May 2023-Aug 2023

- Conducted testing on various Renesas MCUs paired with diverse sensor and motor configurations using C and Linux in conjunction with laboratory bench tools
- Started the creation of reusable blocks in Altium Designer, contributing to the company's first fully functional set and delivered a comprehensive instructional presentation to an international set of teams
- Created a Python-based automation program for extracting and statistically analyzing sales data

Duke Engage, *Engineering Fellow*, Kampala, Uganda

May 2022-July 2022

- Worked with an international team in Uganda to design and build a cost effective IV fluid warmer
- Successfully designed and prototyped an electrical system meant to maintain temperature with accuracy
- Lived in Uganda and completed various engineering challenges with Ugandan engineering students

Duke University Pratt School of Engineering, *Teaching Assistant*, Durham, NC

Jan 2023-Present

- Effectively explain and demonstrate electrical and computer engineering concepts to students
- Lead a lab focused on Microelectronics, explaining niche concepts and how to use lab bench tools
- Assisted the instruction of ECE110: Fundamentals of ECE and ECE230: Introduction to Microelectronics

LEADERSHIP/EXTRACURRICULAR EXPERIENCE

Duke Robotics Club, *Co-President* (2022-2024), Durham, NC

Aug 2021-Present

- Manage three sub-teams in the production of a fully functional AUV utilizing ROS, complete with computer vision and acoustics sub-systems; ensuring a cohesive design that fits all the robot's functionality needs
- Designed PCBs for active filtering of hydrophone signals and an algorithm localizing an underwater pinger
- Co-Authoring a technical report that received first place at the International Robosub competition

HackDuke, *First Place Recipient*, Durham, NC

Sept 2023

- Used C++ and Python in a device used to remotely watch many patients to reduce nurses' workload
- Developed a modular system interfacing with multiple sensors to keep track of different patient vitals

TECHNICAL SKILLS

Python, C, C++, Java, ROS2, MATLAB, HTML, Embedded Systems, Raspberry Pi, Circuit Design, Electronics Lab Equipment, OpenCV, Saleae, PCB, Altium Designer, MS Office, Project Management, 3D printing