AYDIN O'LEARY

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831-521-6655
https://aydin.zip

SKILLS

Rust, C/C++, Linux, Python, Git, KiCad, electronics test equipment, systems thinking

EDUCATION

University of California, Irvine   December 2025
Master of Embedded and Cyber-Physical Systems

Olin College of Engineering   May 2023
Bachelor of Science, Electrical and Computer Engineering   *3.83 GPA*

EXPERIENCE

Cybersecurity Research Intern – Forescout Technologies   Summer 2023
- Created a toolkit of Python scripts that leverage large language models to generate decoy servers, files, and sensitive information in order to entice threat actors.

Software Engineering Intern – ThayerMahan   Summer 2022
- Created a prototype in Rust targeting embedded Linux that performs beam-steering analysis on streamed or recorded hydrophone sensor data and exports the results in JSON format.
- Researched and reported on the suitability of Rust for signal processing applications in the naval defense industry, highlighting cybersecurity, speed benchmarking, and ease of adoption.

Systems Test Consultant – Project WTR   Summer 2021
- Constructed a self-contained, auto-logging sensing suite with an Arduino and a Raspberry Pi to measure the multi-directional turning forces exerted on assistive walkers in order to compare their ease of use.
- Designed and performed maneuverability tests on a range of assistive walkers to determine market viability in advance of a patent application.

Research Assistant – Olin ThinSat   Spring 2021
- Designed a FreeRTOS satellite control program to launch a scientific payload within 40 miles of a ground observation site as part of orbital debris calibration experiments with Prof. Christopher Lee.
- Selected real-time clock, microcontroller, and EEPROM chip components considering accuracy, reliability, and suitability for use in satellite systems.

PROJECTS

Firmware/Power Electronics Engineer – Senior Capstone   Fall 2022 - Spring 2023
- As part of a contracted project for Watts Water, designed an electrical system to extract power from a spinning turbine using regenerative braking techniques.
- Implemented firmware for a regenerative braking motor controller using an STM32 chip in Rust.
- Managed an $8,000 budget to fulfill the material, equipment, and manufacturing needs of the five-person team across two prototype-revision cycles.

Lead Systems Engineer – Olin Rocketry   Fall 2021 - Spring 2022
- Core leadership in a team of 20 students designing the Phoenix IV, a high-powered model rocket that carried a 4 kilogram payload to 10,000 feet.
- Defined systems requirements matrix and power budget for Phoenix IV in alignment with NASA standard practices, and designed system integration testing plans to fulfill these requirements.