Ethan Armstrong

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Education

University of Washington: Seattle, WA |JUNE 2025

- Current overall GPA: 3.6
- Dean's List Spring 2022, Fall 2023, Winter 2023, Spring 2023

Aliso Niguel High School: ALISO VIEJO, CA |JUNE 2021

- GPA: 4.06

Experience

Founder, Head of Firmware of Development: Second Sun Laboratories |April 2023 – Current

- Write firmware and manage integration for multiple low power 4G and 5G IOT products to facilitate general data gathering and infrastructure monitoring. Manage and lead hardware R&D for new PCB designs. Collaborate with team to solve problems in all aspects of development. Communicate technical aspects to business partners, and potential customers.

Lead Controls and Electronics Engineer: Society for Advanced Rocket Propulsion |October 2021 – Current

- Manage a small team in the creation of multiple controls and electronics projects for use in SARP rockets.

Philanthropy & Fundraising Chair: Pi Kappa Alpha Beta Beta |March 2023 – Current

- Coordinated and managed multiple events in order to raise over $10000 for local charities

Related Extracurricular Projects

"ARES" Autonomous Recovery System

- Built custom PCB Stack, Radio, Flight Computer, Motor / Power Board. Utilized custom PID based control stack to actuate Rogallo Wing Paraglider for easy post-flight rocket recovery.

STM32 Bootloader System / Ecosystem

- Creation of a custom bootloader that allows easy flashing via GUI application, and facilitates the debugging process

Designed "P.L.O.P" control codebase

- PID and LQR controller, sensor fusion, actuating control surfaces, radio control, ground station linking

Short wave VHF radio PCB

- Designed and optimized 2m/70cm PCB. Use STM32 to allow multiple easy connection methods for use in other projects.

"Rocket Ground" desktop data visualizer

- Used QT to design GPU based GUI, asynchronously pull API data, display real time flight data, send commands

"Image Converter" desktop application

- Used QT to design Windows GUI, Researched and re-implemented image format conversions

"FilePush" File Sharing Website

- Designed and hosted HTTPS website using React and Rust. Designed encryption system for login and storage

NGINX proxy server

- Designed a NGINX based proxy server on remote server instance, Integrated GitHub CI/CD for ease of update

Class 1 Rocket build

- Built rocket frame, designed dual deployment flight computer, received NAR level 1 certification

Relevant Skills

- Rust
- C / C++
- Python
- Java
- Java Script / HTML / CSS
- Embedded Devices
- Sensor Fusion
- PCB Design
- Soldering

Volunteer work

- Pi Kappa Alpha Community Service Volunteer
- Sound Foundations Volunteer