

# Ethan Armstrong

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## Education

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### University of Washington: Seattle, WA | JUNE 2025

- Current overall GPA: 3.5
- Dean's List Spring 2022

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

- GPA: 4.06, SAT: 1440
- AP Scholar, Scholar-Athlete, Superintendent's Honor Roll, Teal Cares Award

## Experience

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

- Controls Lead, Lead Engineer on design of software and control systems, manage 3 other engineers

### Webmaster: Aliso Niguel football and pep-squad | September 2018 – June 2020

- Managed and updated announcements and events, designed registration system with linked database

## Related projects

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### Designed P.L.O.P Control codebase

- PID and LQR controller, sensor fusion, path integration, actuating control surfaces, radio control

### Short wave VHF radio PCB

- Designed PCB utilizing STM32, wrote control code, I2C, and Serial Interface, wrote external libraries

### Designed drone control systems

- Integrated sensors, designed PID controller, ran simulations, conducted wind tunnel tests

### Rocket Ground desktop application

- Used QT to design GPU based GUI, asynchronously pull API data

### Image Converter desktop application

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

### File Linking website

- Designed and hosted HTTP based file linking website, Created front and back end from scratch

### Wave Function Collapse generator

- Implemented WFC generator into a self-hosted website, designed API callback system

### Car Bluetooth audio system

- Created Bluetooth audio sync on raspberry pi, wired and fused circuitry into my car

### NGINX based 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

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|-----------|----------------------------|---------------|
| • Rust    | • Java                     | • 3D modeling |
| • C / C++ | • Java Script / HTML / CSS | • PCB Design  |
| • Python  | • GUI development          | • Soldering   |

## Extracurricular / volunteer work

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|--------------------------|--------------------------------|
| • ANHS Varsity Football  | • Wolverine Field Construction |
| • ANHS Wrestling         | • ANHS Lift-A-Thon Fundraiser  |
| • ANHS community service | • ANHS Pep Squad Webmaster     |