

# Ethan Armstrong

Aliso Viejo, CA • 92656 • 949-424-4530 • warmst@uw.edu • [www.linkedin.com/in/ethan-armstrong-68b980187](https://www.linkedin.com/in/ethan-armstrong-68b980187) • [github.com/explosion33](https://github.com/explosion33)

---

## Education

---

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

- Current overall GPA: 3.5

**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

---

**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

**Construction manager:** Aliso Niguel football | September 2020 – June 2021

- Managed small team in the construction of new equipment and areas around the football field

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

- Designed registration form with linked database, Managed announcements, and events,

## Related projects

---

**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

---

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

## Extracurricular / volunteer work

---

- |   |                                |
|---|--------------------------------|
| • ANHS Varsity Football                       | • Wolverine Field Construction |
| • ANHS Wrestling                              | • ANHS Lift-A-Thon Fundraiser  |
| • ANHS field cleanup                          | • ANHS Pep Squad Webmaster     |
| • Wolverine Football Player Registration Site |                                |