Ethan Armstrong

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

Extracurricular / volunteer work

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