

Alex Henin

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EDUCATION

Cal State Long Beach (CSULB) | Aerospace Engineering (GPA: 3.7)

Graduating: Spring 2029

Providence High School | Valedictorian (GPA: 3.85)

Graduated: Spring 2025

RELEVANT SKILLS

Software: Solidworks, Fusion 360, Onshape, Blender, Github, Visual Studio Code, Excel

Programming: Python, Java, JavaScript, MATLAB, HTML, CSS

Engineering: CAD Modeling/Drafting, GD&T, DAQ, Procedure/Technical Writing, First Principles Design, Prototyping, 3D Printing/Slicing, Soldering, Power Tools

Operations & Testing: Pressure and Cryogenic Operations, Hazardous Material Handling, Hot/Static Fire Testing, In-field troubleshooting, Cold Flow Testing, Hydrostatic Testing, Pyrotechnics Testing, Hardware Inspection, In-field troubleshooting

EXPERIENCE

Beach Launch Team – Fluids and Propulsion Engineer – Long Beach, CA

Aug. 2025 – Present

- Designed fluid systems for LOX and kerosene liquid-fueled rocket using Darcy-Weisbach equations.
- Validated system integration and combustion stability by executing a successful hot-fire of the LR-101 engine under flight conditions and producing 800 pounds of thrust; used findings to fix in-line regulators
- Led waterflow testing to characterize pressure drop, mass flow rate, and CV across whole system

IPT (Integrated Procurement Technologies) – QA Specialist – Goleta, CA

June 2024 – Aug. 2024

- Reduced parts turnaround time and improved contract clarity by leading a complete overhaul of the backend documentation system via a new, fast method of including minimum needed info in part orders.
- Inspected aerospace and defense components for FMS, DCS, USG, and OEM clients, ensuring 100% compliance with required documentation to prevent part rejections.

Riviera Robotics – CNC/General Technician – Goleta, CA

Oct. 2021 – Dec. 2021

- Fabricated precision components for F.I.R.S.T. competition robots using CNC machinery.
- Repaired robot and made replacement parts to maintain performance under time pressure.

Kids Helping Kids – Chief Financial Officer – Santa Barbara, CA

Sept. 2023 – Feb. 2025

- Managed revenue streams, budgets, and backend (payments, website, etc) for 100% student-run nonprofit
- Led complete sell out of +2,000 seat theater and raised +\$80,000 in net profit that went directly towards fighting human trafficking and supporting vulnerable children globally. ([Article](#))
- Founded and led team behind “Call to Give”, raising \$20,000 using NFC bracelets

PROJECTS

Rocket Ignitor

Jan. 2026

- Developed a reusable e-match mandrel, replacing a single-use disposable system by designing a three-pronged mechanical interface that precisely centers the e-match within the combustion chamber.

NFC Bracelets

Jan. 2024

- Made 300 NFC-enabled bracelets and a custom website to host and share stories of rescued children.

Disaster Relief Infrastructure Project

June 2023

- Rebuilt university and provided disaster relief on Guam and nearby islands from worst hurricane in 20 years
- Manufactured 4 20ft steel light poles; performed structural analysis to ensure stability against wind loads.

Portfolio Website

June 2023

- Used JS to transition from a multi-page to a centralized Single Page Application (SPA) to eliminate page-load times and improve user experience.
- Implemented custom JS features, including image carousels and a pulsating header, while utilizing GitHub for version control to manage iterative development and site deployment.