

Alec Steiner DeGraaf

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Education

B.S Computer and Electrical Engineering

University of Colorado Boulder

GPA 3.7

Boulder, CO

May 2025

Skills

C | C++ | Java | Python | Golang | Embedded Systems | Arduino | LTSpice | HTML/CSS | Javascript | SQL | Onshape | Soldering

Experience

Software Engineering Intern - L3Harris Technologies

06/24-08/24

- Modernized 1400 lines of operating code in C and Java into Golang in 3 months. Delivered weekly code reviews to my team and over 40 pages of documentation. Code passed penetration testing and was adopted into lab systems before my internship completion.
- Built a comprehensive Golang CLI tool that validates JSON configuration files for software-defined radio units, featuring multi-mode operation support and interactive field documentation.
- Aided in system integration of software to hardware for radio units and collaborated with quality control to ensure all QA checklists passed verification before customer shipment.

Software Engineering Intern - G-Space, Inc.

05/23-01/24

- Developed Python-based computer vision algorithms to analyze manufacturing differences between terrestrial and microgravity environments across alloys, biomaterials, and plant specimens for space research applications.
- Designed and prototyped embedded carrier board and compute unit for ISS-bound payloads, handling full hardware lifecycle from concept through Earth-based testing validation.
- Optimized AWS S3 digital storage file transfer and sorting algorithms, improving data pipeline efficiency by 20% and reducing team processing time from 20 minutes to 5 minutes.
- Built a customer-facing web platform HTML/CSS/JavaScript as MVP to streamline investor and client access to G-Space's space manufacturing services.

Electrical Engineer - Colorado RoboSub

09/22-01/24

- Completed design, build, and testing of the competition ROV (remotely operated vehicle).
- Assisted in development of electronics in order to create a waterproof design while minimizing potential points of failure.
- Developed code in Arduino to ensure proper functionality of thruster units and stereo vision systems within the AUV.

Electrical Engineer - Formula SAE

09/21-05/22

- Designed and developed the ECU including speed, acceleration, and power output sensors as well as improved control interfaces for the CB3 race car.
- Implemented successful testing programs through work on data acquisition from the car.
- Assisted in multiple facets of the organization including recruiting, budgeting and finances, and electronics program management.

Honors and Awards

Engineering Dean's List | Engineering Honor Society | Chancellor's Achievement Scholarship - \$20,000 over 4 years