Alec Steiner DeGraaf

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Education

Boulder, CO

B.S Computer and Electrical Engineering

University of Colorado Boulder — May 2025

GPA 3.7

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**

- Developed an extensive command line interface in Golang for the validation of JSON configuration files for a software defined radio unit including options for various different modes of operation and detailed explanations of different fields to the user upon request.
- Performed ground up builds of the software on the radio units including development of documentation and proper procedures as well as debugging of the ground up build through use of the RHEL Linux OS.
- Integrated obsolete code from previous programs in C and Java into Golang to be used with shell scripting in the radio units.
- Aided in the system integration of code to the hardware of software defined radio units and worked with quality control before shipment to customers.

Software Engineering Intern - G-Space, Inc. **05/23-01/24**

- Developed numerous video and image processing algorithms in Python to analyze differences between terrestrial and microgravity manufacturing of various materials including, alloys, plants, and biomaterials.
- Designed, manufactured, and tested a prototype carrier board and compute unit to be tested with payloads on Earth bound for the ISS.
- Overhauled algorithms for transfer and sorting of files between S3 buckets in order to improve efficiency in team workflow.
- Developed an online platform with HTML/CSS and Javascript for a minimum viable product to increase ease of access for potential customers and investors seeking G-Space's 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