

# Eli W. Hunter

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## OBJECTIVE

Passionate student seeking to a low level software engineering internship pushing the state of the art through innovative work and research.

## EDUCATION

NC State University – *BS Computer Science & Applied Mathematics*

Aug. 2018 – December 2021

GPA: 4.0, Dean's List All Semesters, Member of Phi Beta Kappa Honor Society

## EXPERIENCE

Aerial Robotics Club – *Software Team Lead & Vice President*

Sept. 2018 – Present

- Compete in the international UAV competitions, AUVSI SUAS and UAV Outback Challenge.
- Manage 8+ person team, running weekly meetings, assigning projects, and keeping track of mission objectives.
- Enhanced algorithm which geolocates ground objects using aerial imagery, allowing for more accurate geolocation and successful geolocation during hardware failure.
- Swapped legacy telemetry and service architecture with the Robotic Operating System (ROS), improving performance and logging and allowing for debugging and simulation.

IBM – *DevOps Software Developer Intern*

June 2020 – Aug. 2020

- Refactored COBOL & PL/I parser builds, reducing build times from 3 hours to 20 minutes and artifact sizes from 3 GiB to 100 MiB.
- Optimized test case runner for IBMz unit tests, reducing test times by 20%.
- Constructed a 1000+ node dependency graph of the entire product, improving visibility of structural issues and identifying key locations to refactor.

Noregon – *Software Engineer Intern*

May 2019 – Aug 2019

- Created a data visualization web portal, allowing sales representatives to get immediate access to individual customers' purchase history.
- Modeled vehicle fault associations with NetworkX graphs, improving previous vehicle fault prediction model.

## PROJECTS

SimpleBGC Serial API Rewrite – *Rust, Cargo, PyO3*

<https://github.com/ncsuarc/simplebgc-api-rs>

Rewrote BaseCam Electronics C++ Serial API, providing a more ergonomic API with correct types, automatic command validation, and Python bindings.

Hugo Heading Render Hooks – *Go*

<https://github.com/gohugoio/hugo/pull/7133>

Added custom rendering hooks to markdown headings for the static site generator, Hugo, supplanting regex hacks.

Alternative AUVSI Judges Server Client – *Python, Protobuf, REST API*

[https://github.com/ncsuarc/interop\\_clients](https://github.com/ncsuarc/interop_clients)

Created alternative to the provided judge's clients which removes the dependency on protoc, is easier to install, provides type annotations, and has additional optional features.

## TECHNICAL SKILLS

LANGUAGES Rust, Python, C, C++, Go, Lua, Java, Javascript, Assembly

TOOLS Linux, QEMU, Docker, Ansible, Git, Travis, Jenkins, Nginx, Cargo, Poetry, Maven

LIBRARIES ROS, Protobuf, ZeroMQ, NNG, Serde, PyO3, Flask, NetworkX, Pandas, NumPy