Eli W. Hunter

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OBJECTIVE

Passionate student seeking to improve the state of the art for network communication systems through innovative research.

EDUCATION

NC State University – *BS Computer Science & Applied Mathematics*   Aug. 2018 – May 2022

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.
- Modelled 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

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