

# Sebastian J. Hamel

He/Him



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## Education

### Master of Science, Computer Science

*Appalachian State University, ABET Accredited*

Aug 2020 – May 2022

Boone, NC, USA

- Concentration in Systems
- Summa Cum Laude Honors

### Bachelor of Science, Computer Science

*Western Carolina University, ABET Accredited*

Aug 2015 – May 2019

Cullowhee, NC, USA

- Minor in Mathematics
- National Honor Laureate

## Career

### Software Engineer I

*NASA/ToSC, Command & Control*

Feb 2022 – Nov Present

*Kennedy Space Center, FL, USA*

- Software engineering of simulation software for Exploration Ground Systems for Artemis II, Artemis III
- Developed and verified software conforming to NASA Class C Software requirements
- Developed and debugged networked software communicating with PLC runtimes using the Common Industrial Protocol (CIP)
- Reverse-engineered legacy Rockwell PLC functions and designed their re-implementation and integration into a custom PLC emulator
- Created design presentations to coordinate strategy between workgroups to emulate various PLC functionality in emulation

### Software Engineer I

*AFIT, Center for Space Research & Assurance*

Jun 2020 – Feb 2022

*Wright-Patterson AFB, OH, USA*

- Contributed to the first open-source spacecraft flight software framework written in Rust
- Developed CubeSat flight software in C with NASA's cFS framework and also in Rust with KubOS
- Developed CubeSat ground control software which interfaces with databases and TCP/UDP hardware interfaces in Python
- Automated generation of template files ingested by flight software and ground software to accelerate CubeSat mission development

### Software Engineering Co-op

*NASA IV&V*

Jan 2019 – Aug 2019

*Fairmont, WV, USA*

- Contributed to NASA's open-source flight software simulator (NOS3) with upgraded packages and documentation
- Developed Rust bindings to C++ based hardware abstractions layers for NOS3 simulator
- Modeled CubeSat OEM hardware components into C++ emulators running in NOS3

## Competencies

**Primary Languages:** Rust, Python, TypeScript, Java

**Human Languages:** English ★★★★★, Danish ★☆☆☆☆

**Content Management:** Git, GitHub, GitLab, Artifactory, DockerHub, AWW

**Systems Engineering:** Kubernetes, Docker, Ansible, Terraform, Flux, Kustomize

**CI/CD:** GitHub Actions, GitLab CI

**Databases:** Redis, PostgreSQL, DynamoDB