Sebastian J. Hamel He/Him

@NASA

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Education

Master of Science, Computer Science — Aug 2020 – May 2022
Appalachian State University, ABET Accredited — *Boone, NC, USA*
- Concentration in Systems
- Summa Cum Laude Honors

Bachelor of Science, Computer Science — Aug 2015 – May 2019
Western Carolina University, ABET Accredited — *Cullowhee, NC, USA*
- Minor in Mathematics
- National Honor Laureate

Career

Software Engineer I — Feb 2022 – Nov Present
NASA/ToSC, Command & Control — *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 — Jun 2020 – Feb 2022
AFIT, Center for Space Research & Assurance — *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 — Jan 2019 – Aug 2019
NASA IV&V — *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, C/C++, Python
- **Other Languages:** Java, TypeScript, GraphQ_, IEC 61131-3 Structured Text, Ladder Logic
- **CI/CD:** GitLab CI configurations (YAML)
- **Content Management:** Git, GitHub, GitLab
- **Software:** Docker, Confluence/Jira, VersionOne, Visual Studio, VSCode