

Ryan D. Beavers

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Software & Systems Engineer | **Python • C/C++ • Simulation & Integration** | Clearance-Eligible

Engineer with foundation in C, Python, and real-time systems development, pursuing aerospace systems engineering with a focus on reliability, integration, and secure software practices. Experienced in building simulation environments, object-oriented codebases, and test pipelines—from high-performance harness development at Intel to containerized labs modeling complex system behavior.

Adept in debugging, documentation, and iterative refinement, with a strong emphasis on reproducibility and long-term maintainability. Driven by curiosity and precision, committed to mastering the full software development lifecycle and contributing to mission software within space systems.

TECHNICAL SKILLS

Programming & Software Development

C/C++ • Python • Java • Bash • Object-Oriented Design • Git/GitHub • CI/CD Pipelines

Systems & Platforms

Linux (Ubuntu) • Windows • TCP/IP Networking • REST APIs • Containerized & Simulation Environments

Modeling & Analysis

Matlab • Simulink • R • Jupyter • System Modeling • Data Structures & Algorithms

Security & Reliability

Splunk Power User • Wireshark • Log Analysis • Vulnerability Assessment

Certifications (In Progress)

CompTIA Security+

TECHNICAL PROJECTS

Systems Simulation & Fault Modeling Lab | Software & Systems Engineer | 2025

Developed a Python-based simulation environment to model complex system states and detect anomalous or fault conditions using statistical inference. Designed and validated algorithms for reliability analysis using synthetic telemetry-style data, emphasizing accuracy, reproducibility, and deterministic behavior under test.

Technologies: Python • Simulation Frameworks • Anomaly Detection • System Diagnostics • Regression Algorithms

Data Integration & Validation Framework | Software Engineer | 2025

Engineered a data modeling pipeline using R and SQL to integrate and verify multi-source data streams, implementing predictive methods and validation routines to support high-integrity decision environments. Experience directly applicable to spacecraft telemetry handling, mission data pipelines, and system verification.

Technologies: R • SQL • Data Pipelines • Predictive Modeling • Data Validation & Integration

EXPERIENCE

Teaching Assistant – Technical Communication & Process Support | PSU September 2021 – June 2022

- Supported evaluation systems and structured data workflows across 50+ users, applying methodologies similar to quality assurance and process validation in engineering teams.
- Produced analytical reports and documentation to improve consistency and execution reliability.
- Facilitated communication between cross-disciplinary stakeholders, reinforcing clarity and procedural alignment — key to collaborative engineering environments.

Independent Research & Technical Development (Career Sabbatical) 2010 – 2021

- Completed graduate study at Johns Hopkins, strengthening analytical reasoning and systems thinking.
- Managed complex logistical planning and responsibilities while maintaining ongoing engagement with emerging technologies and engineering concepts.
- Continued independent study in data systems, programming, and secure computing — demonstrating long-term discipline and self-directed professional development.

Software Engineer | Intel Corporation | Hillsboro, OR May 2008 – November 2010

- Engineered real-time data and diagnostic tools using Python and Perl to reduce system feedback latency from 24 hours to near-zero — critical for validating high-performance architecture.
- Developed large-scale simulation environments modeling 50,000+ clients to stress-test system reliability, power efficiency, and scheduling — experience directly applicable to mission-critical software testing.
- Collaborated with cross-functional teams to optimize power usage by 30%, contributing to multi-billion-watt savings and earning four engineering recognition awards.
- Mentored junior engineers in benchmarking frameworks and system performance modeling, reinforcing a culture of precision and code integrity.

EDUCATION

Doctoral Program – Cybersecurity Analytics — *George Washington University*

Program Start: January 2026

Research focus in machine learning for cyber defense, secure systems engineering, and anomaly detection in mission-critical environments.

M.S. in Applied Statistics — *University of Oklahoma* (Expected Dec 2025)

Focus on regression, machine learning, and simulation modeling.

Capstone: Developing statistical anomaly detection models for cybersecurity system telemetry.

Tools: R, Python, SQL, JAGS, LaTeX

Cybersecurity Analytics Bootcamp — *Fullstack Academy* (Jun–Sep 2025)

Immersive training in network security, SIEM (Splunk), scripting (Python/Bash), CI/CD, and system hardening.

M.A. Liberal Arts — *Johns Hopkins University* (Aug 2021)

Emphasis on systems theory, ethics, and analytical reasoning.

B.S. Computational Mathematics — *Arizona State University*