Erik W. Failing

Security Software Engineer | 5+ Years | Pentesting, Fuzzing & Reverse Engineering

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EXPERIENCE

Boeing Intelligence & Analytics | Product Security Engineer III | Apr 2025 - Present

- Pentested and assessed DoD system security as a cyber test team member.
- Found novel vulnerabilities in custom systems; wrote PoCs and verified fixes.
- Led week-long cyber test cycles end to end, turning test objectives into attack cases.
- Built Python fuzzers and reverse engineered custom binaries and protocols to find vulns.
- Bridged red/blue teams and ISSMs as a trusted agent, keeping major cyber tests on objective.
- Used local LLMs (Ollama) to speed code review, log triage, and reporting.
- Mentored engineers across teams in Python and pentesting; led security and dev tool approvals.

Boeing Intelligence & Analytics | Product Security Engineer II | Aug 2023 - Mar 2025

- Solo-built a Python message analyzer enabling new test types; won program innovation award.
- Used source code and software assurance results to focus pentests on the riskiest components.
- Gave SME input on threat modeling and risk scoring; led cyber tabletops setting test objectives.
- Drove team-wide Git adoption, centralizing exploits, scripts, and test data in a shared repo.
- Scrum Master for multiple security teams; briefed leadership at quarterly PI planning events.

World Anchor LLC | Software Engineer & Founder | Jul 2022 - Aug 2023

Full-time between Northrop Grumman and Boeing; includes part-time work outside these dates

- Founded software studio; designed and built 7+ C++/C# projects end-to-end.
- Built Roslyn C# compiler plugin replacing runtime reflection, cutting 10K+ lines of code.
- Engineered client-server networking and state sync in C++/C# with Unreal & Steam SDKs.
- Built secrets-managed CI/CD pipeline auto-releasing Win/Mac/Linux builds, saving ~5 hrs/week.
- Wrote infrastructure-as-code for cloud build servers, cutting recovery from 1 day to less than 1 hr.

Northrop Grumman Corporation | Cyber Systems Engineer I | Jan 2021 - Jul 2022

- Managed software assurance platform; built Python/JavaScript change-approval pipelines.
- Assessed 400+ software/hardware changes for security, advising the change board and redesigns.
- Wrote Python scans purging controlled data on thousands of systems, cutting compliance scope.

SKILLS

Languages: Python, C, C++, C#, Java, Bash | **Familiar:** Go, Rust, JavaScript, PowerShell, Ada
AI: Claude, GPT, agentic coding, prompt engineering, local LLM deployment, model quantization
Application Security: OWASP Top 10, threat modeling, secure code review, fuzzing (boofuzz), SAST, SCA
Software Engineering: Networking, concurrency, REST APIs, SQL, .NET, unit testing, OOP, debugging
Reverse Engineering: Ghidra, GDB, Scapy, binary analysis, exploit development, memory safety
DevOps & Cloud: Git, GitHub Actions, CI/CD, infrastructure-as-code, VM provisioning, AWS
Tools: Kali Linux, Burp Suite, Metasploit, Wireshark, Nmap, Nessus, Splunk, SonarQube, Black Duck

EDUCATION

Master of Science in Cybersecurity and Information Assurance | Western Governors University | 2024
Bachelor of Science in Computer Science | University of Alabama in Huntsville | 2020

CERTIFICATIONS

ISC2 CISSP | CompTIA SecurityX (formerly CASP+) | CySA+ | PenTest+ | Security+