Charles Peyton Wiecking

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EXPERIENCE

Senior Associate, Software Engineer — Sep 2025 – Present
L3Harris Technologies Inc. — *Camden, NJ*

- Developing multiple Java Spring Boot driver applications that interface with radios, modems, and other communication devices over serial and socket connections
- Implementing and testing API endpoints that execute device commands, parse responses, and maintain synchronized state with physical hardware and simulated devices
- Building ICD-defined command workflows, including byte-level encoding/decoding, parameter validation, and structured logging logic
- Maintaining and extending driver assets (JSON command registries, parameter maps, filter definitions) and contributing to internal architecture documentation
- Enhancing internally developed device simulators to reflect ICD behavior and support automated testing workflows
- Collaborating in an Agile environment using Bitbucket, Jira, and Confluence; participating in code reviews, stand-ups, and multi-team integration efforts

Computer Scientist (GS-1550-07/09/11) — Jul 2023 – Aug 2025
U.S. Air Force Life Cycle Management Center (AFLCMC/HNC) — *San Antonio, TX*

- Executed 50+ RFC-compliant interoperability and performance tests (2544, 3393, 5180) on High Assurance Internet Protocol Encryptors (HAIPEs) and tactical radios inside SCIF environments
- Developed a Python SNMP GUI tool for extracting COMSEC metadata, calibration values, and audit logs, enabling engineers to validate device states before testing
- Refactored Java diagnostics tools for APX-119 transponders, automating self-tests and improving workflow efficiency for operators
- Authored technical test documentation and user guides for NSA and USAF engineering teams, ensuring reproducible evaluation procedures
- Validated system behavior in air-gapped environments and supported secure toolchain provisioning for classified operations

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, Bash
Backend & APIs: Spring Boot, REST APIs, Gradle, JSON processing
Communications: Serial (RS-232/COM), TCP/UDP sockets, ICD interpretation, byte-level parsing
Systems & Security: Linux (Debian, Ubuntu, Kali), Windows, COMSEC concepts
Tools: Git, Bitbucket, IntelliJ, VS Code, Postman, Jira, Confluence
Certifications: CompTIA Security+, McAfee C|OSINT

EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech) — Aug 2025
*M.Eng. Computer Science and Applications | **GPA:** 3.87/4.0* — *Blacksburg, VA*

Virginia Military Institute — May 2023
*B.S. Computer Science, Minor in Cybersecurity | **GPA:** 3.48/4.0* — *Lexington, VA*

Selected Coursework: Design and Analysis of Algorithms, Operating Systems, Database Management Systems, Network Arch. and Protocols I & II, Network Security, Linux Kernel Programming, AI Tools for SWE

PROJECTS

PIES Electronic Health Records System | *Spring Boot, Next.js, MySQL, Docker* — May 2025 – Aug 2025

- Built a secure EHR workflow system supporting therapist intake, SOAP notes, and client management with HIPAA-aligned data handling for PIES Holistic Yoga Studio
- Implemented JWT authentication, role-based access controls, digital signatures, and automated synchronization between backend and frontend services

RustShield | *Rust, Linux Kernel, C, Bash* — Feb 2025 – May 2025

- Explored feasibility of Rust-based Linux Security Modules (LSMs) by modifying kernel build configurations, integrating Rust components, and developing a hybrid Rust–C module structure
- Analyzed Rust-for-Linux API limitations, documented missing LSM hook support, and proposed kernel-level changes required for future Rust-based access control modules