

Nolan Peters

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EDUCATION

North Carolina State University

Master of Science in Computer Science

Raleigh, NC

Expected December 2025

North Carolina State University

*Bachelor of Science in Computer Science, Cybersecurity Concentration
Summa Cum Laude*

Raleigh, NC

August 2020 – May 2024

EXPERIENCE

Teaching Assistant - Senior Design (CSC 492)

North Carolina State University, Department of Computer Science

August 2024 – Present

Raleigh, NC

- Ensured student projects adhered to security best practices, aligning with industry compliance standards.
- Guided teams on implementing secure authentication, access control, and data encryption mechanisms.
- Assisted in integrating security considerations into the software development lifecycle to mitigate vulnerabilities.

Teaching Assistant - Introduction to Computing in Java (CSC 116)

North Carolina State University, Department of Computer Science

January 2023 – August 2024

Raleigh, NC

- Supported students during lecture-based lab sessions and office hours, providing individualized help across a range of skill levels.
- Designed and graded programming assignments with a focus on code documentation, input validation, and exception handling.
- Taught debugging and testing strategies using JUnit

PROJECTS

GRASS GIS Security Audit and Vulnerability Analysis

- Conducted vulnerability assessments using CodeQL, Bandit, and Synopsys to identify security risks.
- Developed a triage system for prioritizing security vulnerabilities based on severity and impact.
- Contributed security patches, improved input validation, and mitigated unsafe memory operations.
- Authored a security report detailing findings, risk assessments, and remediation strategies.
- Collaborated with maintainers to implement secure coding practices and improve repository security.

January 2024 – May 2024

OfficeHowlers - Secure Office Hours Queue

- Developed a secure queue system using Node.js, Express.js, and MariaDB, integrating authentication and encryption.
- Implemented role-based access control to enforce security policies and prevent privilege escalation.
- Built a React front-end with WebSocket updates for real-time security monitoring.
- Optimized database queries and API performance to support high-concurrent usage securely.
- Designed an audit logging system to track user interactions and detect anomalies.

August 2023 – December 2023

TECHNICAL SKILLS

Programming Languages: Java, C, Python, SQL (PostgreSQL, MariaDB), TypeScript, JavaScript

Security Tools & Analysis: Ghidra, CodeQL, Bandit, Synopsys, OWASP ZAP, static code analysis, vulnerability assessment, penetration testing, secure software development

Software Development & Frameworks: React, Node.js, Express.js, Material-UI, Sequelize ORM, Docker

Networking & Security Protocols: IP/TCP, TLS, IPSEC, IKE, BGP, OSPF, firewalls, NAT, intrusion detection, security monitoring

Testing & Debugging: JUnit, pytest, gdb, fuzz testing, static code analysis, secure code review

Cryptography: Symmetric & asymmetric encryption, secure cipher modes (CBC, CTR, GCM), cryptographic protocols, key management, hashing algorithms (SHA, HMAC)