JARRED CARTER

EDUCATION

MS Cybersecurity • New York University • May 2025 • GPA 3.8/4.0

- Coursework: Information Security and Privacy, Network Security, Pentesting and Vulnerability Analysis, Application Security, Computer Networking, Digital Forensics, Reverse Engineering, Web Application Exploiting
- Certifications: CompTIA Security+, Pentest+ (in progress)

BS Computer Science, BS Cybersecurity • Marshall University • Dec. 2022 • GPA 3.7/4.0

RELEVANT EXPERIENCE

Security Analyst 06/2024 – 09/2024

Open Law Library, Washington, D.C.

- Achieved 25% increase in efficiency of setup process by parallelizing backend operations in 14 code dependencies for data fetching and streamlining logging output verbosity for government law repositories.
- Expanded system compatibility by 30% by enhancing hardware security of two-factor authentication protocols.
- Impacted UX for 40k+ users across high-traffic open-source repositories by resolving 6 critical GitHub issues, boosting repository health and reducing delays and bug-related downtime during edits to repositories.

Information Systems Specialist I 05/2018 – 08/2023

WorkForce West Virginia, Charleston, WV

- Reduced costs by ~$150k by designing and implementing in-house resume construction system using ASP.NET, C#, HTML5, and SQL to eliminate need for Microsoft Office 365 licenses at 18 career centers statewide.
- Spearheaded comprehensive user support and training documentation process to optimize future employee onboarding and decrease time spent on future software development and feature addition efforts.
- Boosted interdepartmental productivity by engineering and launching a DevOps-compatible project management system complemented by system entity mapping diagrams and dashboards for review by upper management.
- Decreased setup errors by 40% and accelerated new-hire readiness by streamlining user-account turnaround in Salesforce CRM; implemented standardized provisioning processes according to COVID remote work policy.
- Strengthened agency cybersecurity posture by reviewing and correlating Nessus scan results to known CVEs for remediation, reviewing NIST and MITRE ATT&CK frameworks for compliance with federal guidelines and risk objectives, and supporting hardware/system implementations with technical teams.

Penetration Testing Engineer 08/2022 – 12/2022

City National Bank, Cross Lanes, WV

- Achieved a reduction in successful phishing attempts by 58% by executing cybersecurity-focused company-wide newsletter campaign on email phishing, password security, and social engineering tactics, impacting 1k+ employees.
- Enhanced enterprise threat detection and network security by configuring and deploying honeypots using Raspberry Pi.
- Performed comprehensive network penetration testing and verified patching of previously discovered vulnerabilities by exploiting web applications and scanning network traffic logs using Metasploit, Wireshark, Maltego, and Shodan.

PSL Research Test Engineer 06/2021 – 08/2021

NASA Glenn Research Center, Cleveland, OH

- Saved ~$1m in costs per test run by developing a virtual simulator in IEC Structured Text language that enabled the simulator to emulate the addition of fuel into the propulsion systems laboratory with NASA mechanical test engineers.
- Increased projection accuracy by 80% by analyzing existing propulsion data with Excel for accurate trend projections; ensured precise replication of in-flight environments for propulsion emulation through collaboration with engineers to simulate conditions and facilitate accurate readings comparable to airborne flights at high altitudes.
- Authored paper detailing the processes, calculations, scalability, and results of the completed simulator addition.

SKILLS

- Recon Tools (OWASP): Metasploit, Nmap, Recon-ng, AMASS, Maltego, Shodan, FOCA, Nessus, Scalpel, FTK Imager, Autopsy, GDB, Binary Ninja/Ghidra, BurpSuite
- SIEM and Monitoring: Splunk, tcpdump, Wireshark
- Programs and OS: macOS, Windows, Kali, Ubuntu, Articulate 360, Adobe InDesign, Git, GitHub
- Programming Languages: Python, SQL, C#, ASP.NET, Java, HTML, CSS, Flask
- Communication for technical and non-technical stakeholders
- Proficient in English and Spanish (reading, writing, speaking)

AWARDS AND PUBLICATIONS

- CyberCorps Scholarship for Service Scholar, awarded to top 1% of the class for two years in a row.
- J. M. Carter, H. S. Narman, O. Cosgun and J. Liu, Trade-off Model of Fog-Cloud Computing for Space Information Networks, 2020 IEEE Cloud Summit (2020), pp. 91-96, doi: 10.1109/IEEECloudSummit48914.2020.00020.
- J.M. Carter, C.E. Morris, M.J. Oliver, Addition of Stahl Heater to the Propulsion Systems Laboratory Simulator's 450lb Airline, NASA Internal Paper (2021).

PROJECTS

Offensive Security CTF Challenges Fall 2024

- Exploited 20+ vulnerabilities across buffer overflows, register corruption, and glibc/heap memory issues by completing 4 weekly CTF challenges for 14 weeks using reverse engineering tools to analyze C executables, identify vulnerabilities, and develop Python Pwntools scripts for vulnerability exploitation and administrator access.
- Achieved root access on 5 servers by leveraging HTML encoding and SQL-based exploits for web challenges, documenting vulnerabilities and binary analysis findings, exploitation techniques, and payloads in extreme detail.

SQL Database Modeling and Querying Project Fall 2024

- Enabled real-time inventory lookup of over 5k+ items by designing normalized relational schemas from ER diagrams and writing/executing complex CREATE TABLE, INSERT, SELECT, and JOIN statements using MySQL to simulate a donation system for furniture items.
- Validated the design of 3 schemas and database performance by simulating full-stack backend logic using MySQL.

Digital Forensics Final Project Spring 2024

- Reassembled deleted and obfuscated evidence from 8 system images using Scalpel and FTK Imager for recovery of hashes, user accounts, logs, documents, and metadata to deepen digital evidence recovery insights.
- Identified 80+ functions, libraries, and security vulnerabilities by reverse engineering unknown executables, creating and inspecting forensic images/file systems with Procmon and Pestudio.

Pentesting and Vulnerability Analysis Fall 2023

- Achieved root access on 2 servers by identifying critical XSS, SQL injection, and local file inclusion vulnerabilities in a penetration test for NBN Corporation, assessing risks using NIST CVSS Version 3 with average score of 8.86.
- Recommended 5 immediate security fixes and mitigations (input sanitization, system updates, enhanced password policies, microservice architecture implementation) to isolate assets and prevent unauthorized server access.

Cyberassess: Cybersecurity Competency Assessment Spring 2022

- Designed and developed 75% of the interactive assessment modules in Articulate 360 while acting as primary liaison between the team and professor, implanting proactive deadline strategies for delay prevention.
- Spearheaded the design and delivery of 4 final project materials and accompanying presentation to an audience of over 60 colleagues, faculty members, and guests from other projects and the surrounding community.
- Informed 10+ team and faculty members of individual task progress, status, and projected completion times by compiling and distributing 15 comprehensive weekly reports.