

PROFESSIONAL EXPERIENCE

Present Dec 2021	Product Cybersecurity Penetration Tester <ul style="list-style-type: none">› Lead internal pentest engagements on a variety of different ECU and mobile applications.› Coordinated with Security Engineers, Development teams, and vendors to report out and remediate issues.› Discovered multiple vulnerabilities as well as non-compliant implementations in pre-production systems.› Served as point-of-contact and technical resource for broader Cybersecurity organization during technical implementations discussions and reviews.› Conducted special investigations in response to newly discovered exploits and to look into third-party reports.› Provided support and assistance of as point-of-contact for consultants conducting external penetration tests.› Performed code reviews as well as static and dynamic analysis of applications and embedded systems.› Developed new fuzzing tool for validation and testing of internally developed protocols.› Identified opportunities for process improvement to streamline operations and ensure consistency.› Created proof-of-concept attacks for vulnerable components which circumvented security policy.› Contributed materially to our team winning First-place at the DefCon 30 Car Hacking Village CTF, providing over 1500 points to our winning score.› Acted as a representative of GM in the Automotive ISAC Analyst Working Group meetings. <p>JTAG IDA Pro Python Raspberry Pi QNX Android CAN Fuzzing Vehicle Spy SDR BLE Jad-x APKtool</p>	GENERAL MOTORS, Warren, MI
Dec 2021 Feb 2021	Cybersecurity and Network Engineer <ul style="list-style-type: none">› Engineered new solutions for Industrial Network security and Real-time monitoring.› Developed and Maintained internal tools in C# for SNMP management and configuration of plant network switches.› Included feature request updates to enable the e-tool to effectively support the evolving nature of plant-floor devices.› Served as an SME for operations teams during initiative deployment.› Lead development of PC backup and recovery initiative as well as building documentation, policy, and trained deployment team.› Developed specifications and requirement documentation and coordinated with internal development teams and vendors to ensure requirements were met for new equipment deployments.› Created presentations for quarterly Supplier Symposiums, discussing security goals and requirements with suppliers to strengthen relationships and limit future attack surface.› Crafted solution to enable real-time visibility into plant traffic flows with Nfdump and the ELK stack.› Participated in weekly vulnerability assessments and lead Manufacturing's scoring process.› Coordinated with plant personnel to have newly discovered vulnerabilities remediated.› Worked closely with execution teams to troubleshoot issues involving security initiatives and technical controls deployment.› Volunteered for on-site support engagements helping team pull ahead in shutdowns and when resources were low.› Scripted tools for automated deployment of applications and vulnerability remediation to aid execution teams with complicated and repeated processes. <p>ICS Cisco Qualys BigFix ELK EDR SNMP Python C# Vulnerability Assessment NIST CSF Netflow 802.1X</p>	GENERAL MOTORS, Warren, MI
Jul 2022 Apr 2020	Adjunct Cybersecurity Instructor <ul style="list-style-type: none">› Helped deliver classes on Microsoft, Networking, Linux, Python, and Cloud Security.› Worked with students to guide them through lab work and answer any questions.› Maintained stellar instructor rating across cohorts and classes.	UNIVERSITY OF MICHIGAN, Ann Arbor, MI
Apr 2021 Jan 2019	Graduate Research Assistant TA <ul style="list-style-type: none">› Developed malware reverse engineering analysis engine to capture system calls and follow malware flows.› Assisted in research regarding Network data flow patterns and automated topology generation.› Created tools to automate Network topology generation and division.› Produced labs and lectures for Reverse Engineering, Python and Networking II classes.› Graded Networking and Python assignments as needed. <p>Python C++ RADIUS Packetfence LDAP S2E Malware Analysis Code Review</p>	EASTERN MICHIGAN UNIVERSITY, Ypsilanti, MI

Aug 2020
Oct 2015

Owner/Technician

APPLES AND ORANGES COMPUTER REPAIR, Ann Arbor, MI

- > Cultivated the consistently highest rating for a computer repair store in the Ann Arbor area.
- > Doubled yearly sales increasing from \$140,000 annually to over \$280,000, by providing detailed customer-oriented service.
- > Integrated CRM workflow into the company website allowing potential customers to reach out directly from the landing page and have their information be sent into the invoicing system as new lead, creating a customer, and sending a follow-up email automatically.
- > Developed a Python integration for Slack that automated the lead response process.
- > Troubleshooted computer issues ranging from malware, broken screens and hardware, data recovery, custom PC design and builds, liquid damage, and misconfigurations.
- > Streamlined and upgraded processes, incorporating worksheets and process tracking to enhance consistency
- > Worked with local businesses and provided custom tailored managed support, including supporting and hardening Linux clusters and enterprise networks.
- > Handled all business administrative tasks, taxes, insurance, hiring, and contract negotiation as well as day to day operations addressing all aspects of hardware and software support.
- > Designed the network to isolate customer and business VLANs, incorporating the latest in network security to protect user data and ensure compliance.
- > Migrated to a cloud-based CRM from a custom application, allowing better integration with current technologies.
- > Upgraded security protocols to protect data from loss due to hardware failure or attack.
- > Developed internal documentation on all procedures to streamline employee on-boarding and increase consistency across repairs.
- > Prioritized communication with end users to help convey technical issues in lay-terms to instill trust and confidence in our ability and solutions.
- > Managed my team and created training documentation and procedures for on-boarding and continued development.

Troubleshooting Hardware MacOS Windows Linux IPTables Endpoint Protection Consulting OpenVPN Certificate Management
 Program Management Staffing Team-building Customer Service

 **EDUCATION AND CERTIFICATIONS**

Education

2021	Master of Science in Cybersecurity	EASTERN MICHIGAN UNIVERSITY
2019	Bachelor of Science in Information Assurance and Cyber Defense	EASTERN MICHIGAN UNIVERSITY

Certifications

2022	Offensive Security Certified Professional (OSCP)	OFFENSIVE SECURITY
2021	Certified Information Systems Security Professional (CISSP)	ISC ²

Awards

2022	Critical Technical Talent Award	GENERAL MOTORS
2021	Outstanding Student, MS Cybersecurity	EASTERN MICHIGAN UNIVERSITY

 **COMPETENCIES**

- Embedded Systems and IoT** Understanding of common vulnerabilities and attack vectors in these systems
 Skilled in programming and scripting languages such as Python, Bash, Powershell, C#, C++, Java, Perl, and Javascript
 Experience with tools such as JTAG debuggers, SPI, I²C, UART, and emulators
 Familiar with RF tools and technologies such as Wi-Fi, Bluetooth, BLE, SDR, HackRF One, BladeRF, GRC, and wBMS
- Reverse Engineering and Application Testing** Adept at testing and securing mobile applications on Android/Linux/QNX platforms
 Proficient with tools such as Burp Suite, Wireshark, Nmap, and tcpdump
 Experienced with code review, analysis, reversing
 Reverse Engineering with IDA Pro, Ghidra, Objdump, Radare2, Jad-x, and APKtool
- Networking and Security** Knowledge of network protocols such as TCP/IP, HTTP, and HTTPS
 Detailed knowledge of security standards such as SSL/TLS, PKI, and encryption protocols
 Experience with penetration testing tools such as Metasploit
- General Technical Skills** Strong problem-solving and critical thinking skills
 Proficiency in writing comprehensive reports, detailing findings and recommendations for remediation
 Ability to clearly explain technical concepts to non-technical stakeholders
 Experience with agile development methodologies and working with cross-functional teams.