Akshay Kasthurirangan

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EDUCATION

George Mason University (Fairfax, Virginia)   *Bachelor of Science (B.S.) in Cybersecurity Engineering*
- 3.74 GPA (Dean's List - Spring 2024)   Expected Time of Graduation: **May 2026**
- **Major Coursework**: Computing Digital Systems Engineering, Systems Engineering Principles, Computer Programming Engineers, Object-Oriented Modeling and Design, Operating Systems, Computer Networking, Critical Infrastructure Protection, Hardware and Cyber Physical Systems, Secure RF Communications

PROJECTS

OWASP Risk Rating Calculator || Source
- Engineered an **OWASP-Compliant** Risk Rating Calculator, automating the estimation and prioritization of security risks in web applications, **improving risk prediction accuracy by 25%**.
- **Enhanced compliance** and decision-making **across various organizational contexts and business needs**.

Socket Real-Time Chat Application || Source
- Created and **designed a robust chat application** using **TCP Socket Programming** and established seamless real-time communication through an echo client-server architecture.
- Achieved an **average latency of 10ms,** ensuring **low-latency message delivery** and **compatible** performance in real-time communications.

Network Security Lab
- Implemented IP, MAC, and ARP spoofing techniques in a **Metasploitable** environment to demonstrate Denial-of-Service (DoS) and On-Path **threats**, achieving **80% success rate in disrupting network communications** and intercepting data packets.
- Utilized **Python** for **automating** tasks, **reducing manual spoofing detection and analysis times by approximately 15%.**
- Utilized **Metasploit and Wireshark to capture and analyze network traffic**, identifying vulnerabilities and assessing the impact of network attacks.

Elastic Stack SIEM Lab
- Configured and tailored user permissions in a Kali Linux lab environment using **Elastic Stack SIEM** for **effective security event monitoring, sensitive data governance and data loss prevention**
- Developed 5 custom dashboards for visualizing security events and created 10 alert rules for proactive incident response. **Simulated and analyzed over 100 security events using Nmap, enhancing network security and threat detection by 15%.**

Load Balancing Lab
- Configured an Application Load Balancer to manage HTTP and HTTPS traffic, reducing **network latency by 30%** and increasing **application availability by 40%** through CloudWatch. Monitored traffic distribution with health checks, resulting in a **20% improvement in application performance** through optimized load balancing.

WORK & LEADERSHIP EXPERIENCE

Loudoun County Public Schools - *Instructional Substitute Teacher* (January 2023 - Present)
- Effectively facilitated a smooth transition and upheld the quality of education during the head teacher's absence, ensuring consistent progress toward learning goals.

Mason Competitive Cyber (MasonCC) - (April 2024 - Present)
- Participated in weekly meetings to develop skills and expertise in Malware Detection and Cryptography.
- Collaborated with team members to execute Red Teaming strategies in CTF challenges, enhancing team performance.

SKILLS

Tools: Python, C, Powershell, Nmap, Wireshark, Metasploit Framework, Amazon S3, IAM, Amazon EC2

Skills: Threat and Vulnerability Analysis, Security Automation, Information and Network Security, Programming, Cloud Solutions, Cyber Metrics and Reporting, Computer Networking, System Design and Modelling, Operating Systems

Certifications & Training: 98-367: MTA Security Fundamentals, Simulink Onramp, MATLAB Onramp, Microsoft Office Specialist: PowerPoint (2016), IC3 GS6 Level 1 Digital Literacy Certification