Mythreya Hardur Madhukeshwara

College Park, MD | email | (240)-886-7232 | linkedin | portfolio | medium blog | github

Education

University of Maryland-College Park, M.Eng in Cybersecurity Engineering — Expected May 2026

PES University-Bangalore, India, B.Tech in Computer Science Engineering with a Specialization in Networks and Cybersecurity — Dec 2020 - May 2024, GPA: 8.43/10

- **Coursework:** Network Security, Information Security, Cryptography, Blockchain, Cloud Security, Automotive Security, Computer Networks

Projects

Elastic Stack SIEM configuration — Write Up

- Successfully setup Elastic Stack SIEM in a home lab environment
- Demonstrated proficiency in configuring elastic agents in a kali linux VM and an ubuntu VM, for log collection and forwarding to SIEM for security event monitoring
- Acquired skills for querying logs in Elastic SIEM and set up alerts for nmap activity for both agents
- Generated over 60 alerts to test working of SIEM

Home Lab and VPN setup with raspberry pi 5

- Installed, setup, and configured Ubuntu Server 24.04.1 LTS on a raspberry pi 5
- Configured router settings to allocate static IP to rpi5 and setup port forwarding rules
- Installed and configured a VPN server on rpi5 with pivpn, duckdns and wireguard
- Setup Damn Vulnerable Web App (DVWA) and juice shop for web penetration practice

Malware Dev — Write Up

- Developed simple malware that uses self-injection and process injection to execute shellcode
- Malware can inject itself to any running process' memory address and execute in under 10ms
- Learnt how to use and generate shellcode of length of just 232 bytes using metasploit and msfvenom.
- Used Windows API (<Windows.h> in C++) and it's respective functions like VirtualAllocEx(), CreateRemoteThread() to inject malware with memory usage of less than 100Kb

probeX - port scanner — github link

- Developed a lightweight CLI tool to scan a port on any host on the network in less than 0.05s, sometimes upto 10 times faster than nmap
- Gained strong understanding of network protocols and packets (TCP, SYN packets) and port scanners
- Learnt how to construct raw packets from scratch using the scapy python module
- Implemented source IP spoofing and fragmentation to make it hard to be detected by a weak firewall

Achievements

Deep Learning-Based Cancer Classification from DNA Sequences:Prediction using End- to-End Neural Networks without feature selection — Team size: 4, Jan 2023 - Feb 2024

- Trained a Bi-LSTM model and achieved 92.1% accuracy
- Best Paper Award at ICMCER 2024 Conference
- Currently under final publication review

Founding member of startup: EthnoRent — Team size: 6, Aug 2021 - May 2022

- Created a rental solution that cuts down cost of ethnic wear by 90%
- Pre-incubated at E-CELL Shark-Tank India

Skills and Technologies

Python, C, C++, Java, Linux, nmap, metasploit, msfvenom, netexec, evil-winrm, john the ripper, OSINT, SIEM, Wireshark, Raspberry Pi, Docker, Git, Vim, FL Studio, Photoshop, Premier Pro, Blender, Cisco Packet Tracer, MIPS-Assembly, Solidity, AWS, Azure, Kali, Elastic Stack

Certifications

CompTIA Security+ — Expected Nov 2024

OSCP — Expected Jan 2025

LFD103 (Linux Kernel Development) — The Linux Foundation

Ethical Hacking — Simplilearn

Cybersecurity Foundations: Governance, Risk, Compliance (GRC) — LinkedIn