Tarun Ayyagari

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EDUCATION

Masters in Science Computer Science — May 2024
Arizona State University, Tempe, AZ — 4.00 CGPA
Relevant Coursework: Information Assurance and Security, Software Security, Advanced Computer Network Security, Computer and Network Forensics, Applied Cryptography, Computer Systems Security, Computer Systems Security

B.Tech. Computer Science and Engineering — May 2022
National Institute of Technology Calicut, Kerala, India — 8.16 CGPA
Relevant Coursework: Data Structures and Algorithms, Database Management Systems, Operating Systems, Computer Security, Computer Security Lab, Number Theory and Cryptography, Computer Networks, Computer Networks Lab

TECHNICAL SKILLS

Certifications: CompTIA Security+
Programming Languages: C, C++, C#, Python, JavaScript, Bash, shell scripting, x86 assembly
Tools, Databases, and OS: PostgreSQL, MySQL, Ansible, Git, GitHub, Windows, Unix/Linux, gdb, vagrant, VMware, VirtualBox
Computer Security: Burpsuite, Metasploit, Pfsense, Wireshark, tcpdump, Tor, IDA, gdb, linux sandboxing, binary reverse engineering, binary exploitation, x86 assembly, Ghidra, Binary Ninja, Procmon, angr, tcpview, x64dbg
Forensic Analysis: ProDiscover, FTK Imager, dd,Active Disk Editor, kitphishr, hexed.it, Autopsy, Volatility

PROFESSIONAL EXPERIENCE

Siemens Gamesa Renewable Energy, Orlando, USA: SCADA Engineer — 03/2024 - Present
- Performed installation, upgrades and maintenance on SCADA systems deployed in wind farms.
- Handled troubleshooting and configuration of network equipment including **Cisco switches**, **routers** and **firewalls**
- Applied tools like **wireshark, tcpdump, analyzed DHCP and DNS configurations** to troubleshoot communication issues
- Facilitated **cybersecurity updates/ patches** for SCADA systems

EdPlus at ASU, Tempe, USA: Unity Developer Assistant (Part Time) — 12/2022 - 03/2024
- Developed Extended Reality (XR) experiences for ASU Online courses in **Unity**
- Worked with Dreamscape Learn (DSL) to deliver immersive educational experiences
- Responsible for planning and implementing game functionality and VFX, identifying bottlenecks and ensuring quality

Cisco Systems, Bangalore, India: Technical Undergraduate Intern — 05/2021 - 07/2021
- Developed a tool for automation of deployment of virtual switches and routers on VMware ESXi server using **Python** and **Ansible**
- Formulated a **Python** script to automate the configuration of deployed virtual machines

RELEVANT PROJECTS

pwn.college, Course — Fall 2023
- **Exploited vulnerable Linux binaries** and **web servers** in a capture-the-flag format
- Utilized tools like **python, C, x86 assembly, gdb, IDA, wireshark, tcpdump, netcat, curl** to analyze and pwn binaries
- Completed course to earn yellow belt status

Malware Analysis — Summer 2024
- **Reverse engineered** and analyzed the working of **live malware** samples in virtual lab using REMnux and FlareVM
- Applied tools like **PEStudio, Virustotal, angr, IDA,Ghidra** to perform static analysis
- Analyzed dynamic behavior using **procmon, tcpview, x64dbg, wireshark**

Attacking Connection Tracking Frameworks as used by Virtual Private Networks, *Research Paper* — Spring 2024
- Analyzed the impact of CVE-2021-3773 on VPN servers with separate exit and entry IP addresses
- Explored a vulnerability in **Linux connection tracking system** that allows port override on VPNs

Packet Analysis with Wireshark, Course Project — Spring 2023
- Analyzed **packet captures** from previous attacks using **Wireshark** and **tcpdump**
- Identified vulnerabilities exploited in the attacks
- Detected attack patterns and methods to circumvent detection

Pfsense Firewall, Course Project — Fall 2021
- Deployed a **local area network using virtual machines**
- Implemented a **firewall using Pfsense and additional packages**
- Setup **firewall rules, blacklists, rate limiters, NIDS** using **Snort** and **firewall logs**