Jay Girish Amlani

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Summary

Software Engineer interested in Systems, Networks and Security roles. 7 years of overall experience in network stack for Voice over IP telephony in C and C++

Education

Indiana University, Bloomington, IN **Aug 2021-Dec 2022**
Master's in Computer Science 4.0 GPA
Coursework: Network Security**,** Computer Network**,** Quantum programming(Cryptography), Theory of Computation, Operating System, Cyber Defence, Wearable Sensors.

MIT College of engineering, Pune, India **Jun 2012-Jun 2014**
Bachelor of Engineering in Information and Technology 3.8 GPA

Technical Skills

C, C++, Operating System, Cryptography, Post Quantum Cryptography, Python Scripting, Object Oriented programming, SQL, Shell Scripting, SIP, Telephony API, OSPF, BGP, NVGRE, QUIC, WebRTC, CCaaS, UCaaS, Wireshark, Tshark, Docker, Linux Container, Salesforce, Apex, Snort.

Work Experience

Guardant Health, Software Development Intern **May 2022 - Dec 2022**

- Developed a Salesforce based Project Tracking and Resource Management tool for the team to assist the management. Performed **security audit** and resolved a vulnerability found on the team's Salesforce development platform. Developed a Commercial Alert feature for Physicians and Pharmaceutical companies on Salesforce.

Cyberinfrastructure for Network Science Centre - Indiana University, DevOps Engineer **Mar 2022 - Jun 2022**

- As a DevOps Engineer I created **docker containers** for webapps and other legacy applications. Also set up container **orchestration** tool **Docker Swarm** to manage, maintain, and scale the containers.

Avaya, Module Lead **Jul 2014 - Aug 2021**

- Worked on five of Avaya's flagship products as developer and customer product escalation engineer. In addition to that I stepped up to manage and maintain the development servers, testbeds and network lab for my team.
- Implemented a feature to detect and automatically prefix country code in received calls. This feature allowed customers behind a PBX to reach a caller at their exact international number.
- Developed a system health check tool, which could be run onsite to perform live monitoring of customer's systems to dig up data for bug reports.
- Designed and implemented a customer patch management and tracking tool using **SVN**, **SQL** and **Python scripting** for keeping track of patches issued to customers, their development history and root cause analysis. This has saved many hours of research work for engineers to find quick fixes without debugging from scratch.

NVIDIA, Software Engineer Intern **Jul 2013 - Mar 2014**

- Developed a test and regression infrastructure for Windows hardware Quality certification. Used **batch script** and **C** to create various hardware and OS level test cases to reduce testing time reducing sprint cycle from 21 days to 14 days.

Achievements

- **Patent** on "Generation of Complete Communication Logs" Patent number: 10097599
- **Winner's** of Connect Challenge (**startup pitch presentation**), built a **pro-active chatbot** to reach out to students based on change in behaviour and an **automated scheduling system** which would schedule meetings with counsellors
- Created a security framework which was in accordance with **NIST CSF** and **CMMC** level 3 which won **second prize in CyberSecurity Sprint Week** Hackathon by MetroStar and The Mill.
- As part of the Blue team in the **CyberForce** competition, I secured the system by implementing secure SMTP, HTTPs, SSL/TLS, PGP and implemented security policies to make sure the attackers cannot break into the network or systems.

Projects

File System on XINU with LRU caching, Indiana University **Spring 2022**

- Implemented a UNIX-like file system with memory management and support functions like read, write, create, append, delete, directory, soft-links, hard-links as a part of XINU operating system using C.

Futures/Promises to solve producer consumer problem, Indiana University **Spring 2022**

- Wrote APIs implementing Futures-Promises to solve producer consumer problems in data sharing between sensors and host systems. Written in C as a part of XINU OS.

File Transfer Protocol over UDP sockets with TCP-like features, Indiana University **Fall 2021**

- Created a file transfer application implementing TCP features like connection management, reliability, flow control as a wrapper on existing UDP sockets.