YASH SOLANKI

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EDUCATION

University of Southern California, Viterbi School of Engineering — Los Angeles, USA
Master of Science in Computer Science (Computer Networks) **(GPA 3.6/4)** — Aug 2021-May 2023
Coursework: Advanced Computer Networks, Operating Systems, Web Technologies, Analysis of Algorithms, Secure Systems

Pandit Deendayal Petroleum University, School of Technology — Gandhinagar, India
Bachelor of Technology in Computer Engineering **(CGPA 9.48/10)** — Aug 2016-Jun 2020

TECHNICAL SKILLS

Frameworks	**Frontend:** Angular, React; **Backend:** Express JS, Node JS, Android SDK, Flask; **Others:** REST APIs, Ethereum
Technologies	**DevOps:** Git, Docker; **Databases:** Mongo DB, Dynamo DB, Redis, MySQL, Elasticsearch; **Clouds:** AWS, GCP
Languages	**Primary:** C, C++, Python, JavaScript; **Experienced:** Java, TypeScript, HTML5, Solidity, Logstash
Other Skills	Linux, TCP/IP, Network Protocol Design, Operating Systems fundamentals, Machine Learning, Deep Learning

EXPERIENCE

Software Engineer - MTS 2 — Germantown, MD
Hughes Networks — June 2023-Present
- Spearheaded the design, development, and deployment of a proprietary multiple access protocol for HughesNet VSAT, resulting in a remarkable 25% increase in carrier bandwidth utilization using C and C++
- Engineered and implemented optimizations to significantly reduce RF gateway switchover times by 40%, enhancing service reliability during adverse weather conditions for Jupiter 3 connectivity
- Led comprehensive efforts in troubleshooting and resolving layer 2 (Satellite Link Layer + MAC) challenges within Hughes' flagship Jupiter 3 system, ensuring seamless operation and optimal performance

Software Developer — Ahmedabad, India
SharkStriker Inc. — May 2020-May 2021
- Built security agent installers responsible for automating security log pipelines on Windows, Linux and Mac OS systems
- Integrated logs data from 12 Endpoint Management Platforms, Firewalls & SIEM systems to a standardized Elasticsearch schema
- Developed 7 log parsers with Python, C++ and Logstash for the organization of the firewall and endpoint security logs on Kibana
- Worked extensively in Linux distributions for automation using shell scripts, service creation, network & firewall configuration

PROJECTS & PUBLICATIONS

Weenix Operating System | *C, x86 Assembly, Linux*
- Developed a UNIX based monolithic single processor operating system. Implemented kernel to support user space programs in C
- Implemented several modern operating system features like processes, threads, virtual file system and virtual memory, etc.
- Created shadow objects to allow copy-on-write functionality in fork() system calls making the system fast and efficient
- Wrote all OS system calls including but not limited to fork(), mmap(), brk(), read(), write(), open(), close() etc.

Domain Name System & DDos Attack & Defense Simulation | *C++, Python, Linux, Operating Systems*
- Configured a Domain Name System using quagga which performs name resolution in a distributed 8 node environment
- Used C++ to develop scripts to perform various attacks on the configured DNS system using Linux packages like DNSperf & Iperf
- Implemented various DDos defences like automated firewall filtering, Dynamic ECMP load balancing & Traffic Scrubbing and more

Stockker - Web and Android Application | *Angular, Express JS, Flask, Android Studio*
- Developed real time stock trading platform supporting portfolio, watchlist, stock trading, trade data visualization, etc. features
- Used Finnub stock service to create REST API with Express and used Local Storage to maintain users' watchlist and portfolio data
- Deployed this Full Stack Responsive Node-Angular web application on Google Cloud Platform
- Implemented a corresponding Android Application for this platform with similar state management and gesture based UI features

Tamperproof Voting System | *React JS, Python, IOT*
- Designed a tamper-proof voting ecosystem using blockchain and IOT. Implemented distributed cloud-based model for privacy
- Published a product patent under Indian Patent Office in the Official Gazette of India for the Blockchain Based Voting Ecosystem

HONORS & AWARDS
- Selected among top 5 finalists out of 100+ teams nationally in Smart India Hackathon 2019 for the "Self-Learning Chatbot"
- Received project funding grant worth ₹ 1.5 lakh ($ 2000) from our university for IOT-ML based project - "Smart Parking System"
- Published 5 Research Papers and 1 Product Patent in domains like Blockchain, Machine Leaning, Computer Vision, IOT, etc.
- Received "Best Paper Award" at an international conference for the project "Blockchain-based Drug Regulation System"

LEADERSHIP
- Led a team of 52 members as the President of Association of Indian Students. Organized academic and cultural events of India
- Elected as the President of Computer Society of India. Managed a team of 32 students and coordinated execution of workshops, tech-talks, and hackathons to enrich computer science culture at the university