Nimai Patel

State College, Pennsylvania

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Education

The Pennsylvania State University   **August 2023 – Present**
Master of Science in Computer Science and Engineering   *State College, PA*

University of Mumbai   **August 2019 – May 2023**
Bachelor of Technology in Information Technology **CGPA: 9.22/10**   *Mumbai, India*

Experience

Meshnet Electronics   **March 2022 – March 2023**
Embedded Systems Engineer   *Mumbai, India*

- Spearheaded the implementation of over-the-air updates, NTP time synchronization, remote and serial configuration of SOCs, and seamless Modbus communication using C and C++ on the ESP32 microcontroller.
- Orchestrated the design of all components with a focus on minimal coupling, ensuring seamless integration into any project with a significant reduction in development time.
- Led comprehensive testing initiatives, including conducting 20+ range tests, achieving 98% accuracy in sensor calibration, and conducting OTA reliability testing that led to a 40% increase in system stability.

Tata Advanced Systems Limited   **July 2022 – April 2023**
Cybersecurity Project Intern   *Mumbai, India*

- Engineered a robust SOC for TASL by integrating Wazuh, Suricata, and Graylog through the application of Python, Unix scripting, and PowerShell scripting, resulting in 40% faster incident response times.
- Customized attack vectors for IT infrastructure using Caldera, delivering comprehensive security coverage, and generated reports with explanatory graphs and tables automatically using Python scripts.
- Attained 100% automation for system deployment using Python and shell scripting which resulted in a remarkable 75% reduction in deployment time, enhancing overall security and operational efficiency.

The Pennsylvania State University   **August 2023 – Present**
Learning Assistant for CMPSC 311   *State College, PA*

- Gradute Leaning Assistant for CMPSC 311 – Introduction to System Programming
- Conducting effective office hours, addressing students' doubts regarding C and Unix programming, solving environment setup-related issues, and grading papers and assignments

Projects

Rideshare – Decentralized Ride-hailing System   [DOI]

- Used the Ethereum blockchain and Interplanetary File System (IPFS) to decentralize cab bookings, resulting in an almost 100% reduction in middlemen involvement, potentially enhancing efficiency and cost-effectiveness in the real world.
- Developed a user-friendly front-end using Flutter and Dart, ensuring an intuitive experience for users. and conducted rigorous testing to guarantee the platform's reliability and user satisfaction.
- Crafted smart contracts in Solidity to facilitate secure and transparent transactions and Implemented IPFS server code in Node.js, to enhance data storage and retrieval efficiency.

Web Development Portfolio

- Developed a user-friendly web application enabling students to request train pass concessions and generate leaving certificates through the college's portal.
- Collaborated with a team to create FindIt a robust Lost & Found management tool, as part of our submission to the CSI Hackathon. The system efficiently helps users track and retrieve their lost items.
- Co-engineered StackReview alongside my team for OAuth's 2020 Hackathon. The platform facilitates efficient code reviews, fostering collaboration among developers and ensuring code quality.

Technical Skills

Languages: C, C++, Python, Rust, JavaScript, SQL, HTML, CSS, LaTeX, Bash, PowerShell, Lua
Web Technologies: React, NodeJS, AWS, Firebase, MongoDB, Flutter, BootStrap, WordPress, Tailwind CSS
Data Science: Tableau, Pandas, Numpy, SciPy, MatplotLib
Embedded Systems: ESP32, IDF, Arduino   **Blockchain Development**: Solidity, Ganache, Truffle