Nihar Kumar Puthin

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EDUCATION

B.Tech. Computer Science & Engineering, *Shiv Nadar University* 2022 – present
8.76 CGPA

EXPERIENCE

Software Engineering Intern, *Hewlett Packard Enterprise* 03/2025 – present
Apache Spark, Apache Kafka, Delta Lake, Trino, Scala, Python
- Created a simulated IoT data pipeline that processes 1 million kafka producers
- Performed map reduce operations and stored downsampled results in a local delta lake instance
- Updated & Integrated an Enterprise Plugin (Sparklens) for detailed reporting on Resource Consumption and Data throughput

Teaching Assistant, *Computer Science Department, SNU* 08/2024 – present
C/C++, Data Structures, Linux
- Teaching Assistant for the courses - Introduction to Computer Programming and Data Structures
- Created Programming Assignments and Evaluated Students' understanding of important DSA topics

Co-Founder & CTO, *Addy Co.* 10/2024 – present
Python, JavaScript, SQL, Flask, Django, AWS Lightsail, Docker, nginx, CI/CD, Meta Business API, Google Oauth
- Developed a WhatsApp ChatBot utilizing WhatsApp Templates & Flows that lets content creators view Brand Promotions and Submit their YouTube videos utilizing Meta Webhooks with a 100% Response Rate
- Seamlessly Integrated Google Oauth to access YouTube Channel Metrics and Stats and integrated RazerPay UPI ID verification
- Implemented a CI/CD Pipeling using Docker and GitHub Actions, using nginx as a Reverse Proxy and deployed to an AWS LightSail Instance
- Developed a fullstack webapp using Django and Sqlite as a complement to the WhatsApp Chatbot

PROJECTS

Project Delphia | Scratch-Built Operating System Kernel, 05/2024 – 08/2024
Intel x86, POSIX, Microsoft FAT, GCC, cdecl
- Built a two-part bootloader from scratch using x86 Assembly and a fully functional DOS-like Shell
- Implemented the Microsoft FAT12 Filesystem with drivers to ensure cross compatability with Windows
- Set up a GCC cross-compiler and wrote a custom implementation of the C stdlib

eBAJA, SAE India | Embedded Systems Lead, 11/2023 – 04/2024
FreeRTOS, ESP-IDF, PlatformIO, Arduino Core, Blynk IoT, C++
- Developed custom firmware using C++ for ESP32s and Arduinos to interface with an eATV
- Used FreeRTOS to implement time critical drivers for various sensors (Temperature, GPS, Accelerometer/ Gyroscope)
- Syncronized and logged data to the cloud using Blynk IoT over an Enterprise WPA2 Wifi connection.

AlphaExplore | Protein Model Analyser, 09/2024 – 03/2025
Python, JavaScript, Flask, Bash, BeautifulSoup, Selenium, AJAX, HTML, CSS
- Developed a Protein Model Analyser that integrates 5 different tools to generate a comprehensive report of a protein model
- Created a WebScraper using Selenium and BeatifulSoup to utilize web tools that do not provide a REST API
- Created a Single-Page App for end users to access using Vanilla JavaScript and AJAX principles to minimize external dependencies and deployed to an AWS EC2 Instance using Docker and nginx.
- Wrote Bash Scripts to automate CLI Tooling used for protein modeling.

CredHealth | AI Powered Health Platform, 03/2025
Python, FastAPI, Google APIs, JavaScript, Next.js, Ethereum Solidity
- Wrote a FastAPI REST Backend to interface with the Google Fit API, Gemini's Image Segmentation model and a custom Solidity Blockchain to service a React Native Frontend
- Won 4th place overall out of 300+ teams at SNU Hackdata '25 and Best Team from SNU

SKILLS & COURSES

Languages — Python, C/C++, Rust, x86 Asm, HTML/CSS, Javascript, SQL • **Libraries / SDks** — Django, Flask, FastAPI, Bootstrap, Hugo, NumPy, Matplotlib, BeautifulSoup, FreeRTOS, ESP-IDF, Arduino Core • **Tools** — Apache Spark, Kafka, Delta Lake, AWS Lightsail, EC2, Docker, nginx, GNU make, git, ssh, bash, Linux • **Courses** — CS50X - Harvard University

INTERESTS

Debating — Treasurer, Debating Society • **Boxing / MMA** — Member, MMA Club • **Horse Riding** — Member, Equestrian Club