

# Nihar Kumar Puthin

## Computer Science Undergraduate

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## EDUCATION

### Computer Science & Engineering

2022 – present

Shiv Nadar University

8.76 CGPA

## EXPERIENCE

### Career Preview Program Intern

03/2025 – present

Hewlett Packard Enterprise

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
- Integrated Sparklens for detailed reporting on Resource Consumption and Data throughput

### Embedded Systems Lead

11/2023 – 04/2024

eBAJA, SAE India

FreeRTOS, ESP-IDF, PlatformIO, Arduino Core, Blynk IoT, C++

- Developed custom firmware using C++ for embedded microcontrollers to interface with an eATV
- Used FreeRTOS to implement time critical drivers for various sensors
- Synchronized and logged data to the cloud using Blynk IoT

### Teaching Assistant

08/2024 – present

Computer Science Department, SNU

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

## 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
- Implemented a fully functional DOS-like Shell and 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

## SKILLS & COURSES

### Skills

C/C++, Python, HTML, CSS, Javascript, MySQL, Rust, x86 Assembly, Java, Bash | Django, Flask, Bootstrap, NumPy, Matplotlib, FreeRTOS, ESP-IDF, Arduino Core | AWS Lightsail, EC2, Docker, GNU make, git, ssh

### Courses

CS50X - Harvard University

## INTERESTS

**Debating** — Treasurer, Debating Society | **Boxing / MMA** — Member, Dauntless (MMA Club) |

**Horse Riding** — Member, Equestrian Club