Mathew Raju

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Github: https://github.com/wanderman12345

Education

The University Of California San Diego	Rising Graduate
MS in **Computer Science and Engineering**	Expected Graduation: June 2026
The University of California Santa Cruz	GPA: **3.70 / 4.00**
BS in **Computer Engineering**	Expected Graduation: June 2024

Awards: Honors Scholars Program
Relevant Skills: (*Proficient***)**: Python, C, C++, Linux - Expert Level, Wireshark, Firebase, Regex, System Design, ReactJS, Expo, Github, Software Development Process:- Scrum, Jira, Data Structures and Algorithms, mySQL, Javascript, Golang, Matlab

Work Experience

Nutanix   Remote
Capstone Project   *April 2024 – June 2024*

- Collaborated as the **Hardware Validation Dashboard team** to develop a system for visualizing test data results from Nutanix hardware.
- Parsed and processed over **100 JSON files** of test data, storing results in a **PostgreSQL** database.
- Designed **APIs** using Swagger and exposed endpoints for frontend data retrieval to eventually display as a graph to analyze trends.
- designed **SQL queries** to efficiently extract data from the backend database.

University Of California Santa Cruz   Santa Cruz, CA
Group Tutor & Grader   *Sept 2023 – Dec 2023*

- Taught core concepts such a**s Linked Lists, Recursion, Queues** and other Data Structures and Algorithms to 100+ **students.** The concepts were developed in **C programming**.
- Reduced grading workload by **33%** by the addition of **bash scripts** and distributed the workload with other tutors in the class.
- Held office hours **2 times** per week for students so that they can be assisted with their work.

Tech4Good Research Lab   Santa Cruz, CA
Software Lead (Intern)   *Oct 2022 - Dec 2022*

- Lead a **8** member team on developing UI components utilizing technologies such as **Angular JS, HTML and CSS** on a research project named "**Collectively".**
- Managed Merge Requests on **Github** and advised students on **version control** which involved working with **5+ branches** and making changes to the codebase.
- Transformed **Figma Prototypes** into fully functioning features for the related application.

Software Intern   *Jan 2022 – Oct 2022*

- Developed **Python** scripts to analyze logged data from a research database utilizing **FireBase**.
- The implementation of infrastructure was a **100%** improvement as we created a systematic pipeline from the database into **3** data formats. These are **CSV's, Pickles, DataFrames.**
- Created algorithms to filter data and actively calculated the times on generic and specific routes of webpages.

Projects

Multi-threaded HTTP Server
- Used **C programming** to create my own Multithreaded HTTP Server. Utilized **Sockets** to be able to accept requests and create responses.
- Processes requests concurrently by utilizing worker **threads** and a dispatcher **thread.**
- **Atomicity** established using reader-writer locks such as **flock** and **primitive locks**

Gym Essentials App
- Implemented **Javascript** through the **ReactJS** Framework with **Firebase** as the backend database and **Exp**o to communicate with the device being tested on.
- Consisted of Personal Record Tracker as well as workout planner to keep workouts ordered.
- Used **Scrum** methodology for **Software Development** and worked with **Jira** to complete user stories.