

Aadhar Sharma

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Summary

Fourth year student at UCSD majoring in Computer Engineering. Actively seeking opportunities to assist corporations with their objectives and gain industry exposure by directly working on products.

Education

UC San Diego, San Diego, CA

Sept 2020 - Present

- B.S. Computer Engineering | Cumulative GPA: 3.7 | Expected graduation: December 2022
 - Relevant Coursework: Deep Learning, Operating Systems, Software Engineering, Algorithm Design, Java OOP, Advanced Data Structures, Web Development
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Experience

System Design Verification Engineer Intern

June 2021 - September 2021

Western Digital, Milpitas, CA

- Developed a GUI using Python to help Design Verification and optimize Solid State Drive (SSD) testing
- Designed to ingest XML files, backend produces final test parameters based on complex business logic which can be pipelined for the actual tests

Firmware Engineer Intern

May 2020 - August 2022

Western Digital, Milpitas, CA

- Created Python scripts to test Firmware features of a new SSD (ZNS SSD) for Microsoft
 - Firmware Features tested: SLC RLC Relocation (Garbage Collection) and Short Stroke
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Projects

Birds of a Feather (BoF) Android Application

- Incorporated agile practices, worked in a team of 6 to develop an Android app that helps students find other students with common classes
- Designed and tested home UI and bluetooth search UI
- Developed and tested the bluetooth feature in backend using Google's Nearby API to allow users to see other users on the app within 20-30 feet
- Created and updated database accordingly to add/remove newly found students

Nachos Operating System Simulator

- Implemented important functions of an operating system such as: timer interrupt, thread synchronization, thread joining using operating system techniques/methods like condition variables, locks, semaphores, and monitors
- Developed a memory management system with demand paging for virtual and physical memory to support multiprogramming, handled page faults by using the Clock Algorithm (Second Chance Algorithm)
- Created system calls for file management such as: open, create, read, write, close, unlink, execute

Food Classifier with Convolutional Neural Networks (CNNs)

- Developed four CNNs using pytorch and numpy to classify images of food into one of twenty categories
- Designed first two CNNs from scratch, getting test accuracies of 45% and 56%
- Used transfer learning on VGG16 and ResNet18 networks to achieve test accuracies of 79% and 80%

Recipe Manager Application

- Incorporated agile practices, worked in a team of 10 to build upon a previously made recipe manager web app
 - Updated backend by creating a database to store information to make the app more personal and user oriented
 - Worked on specific routes for REST API to send data from the database to the frontend
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Skills

- **Software:** Python, Java, C/C++, Android Studios, C#, HTML, CSS, Javascript, MySQL, ARM, Matlab, Linux, Unix, PyTorch, Numpy, Pandas, Git, Github
- **Hardware:** Knowledge of wiring circuits and using electrical equipment, digital logic design, basic arduino knowledge, NAND Flash, System Verilog