HARSH JAIN

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EDUCATION

Masters Of Science In Computer Science December 2023 - December 2025
University Of Southern California , Los Angeles , California 3.7 GPA
Coursework: Web Development , Analysis of Algorithms

Bachelors of Information Technology August 2019 - June 2023
K.J. Somaiya College Of Engineering , Mumbai , India 9.2 GPA
Coursework: Object Oriented Software Engineering ,Operating Systems , Database Systems

TECHNICAL SKILLS

Programming: Typescript , Javascript , Python , Java , Swift, Shell
Frameworks: React , Angular , Django Rest Framework , Node.Js ,Flask
Technologies: Git , AWS, Docker , MongoDB , GraphQL , PostgreSQL

EXPERIENCE

Swasthya AI, Pune, India: Web Developer Intern August 2023 - November 2023

- Improved API performance by 30% for the EHR application, which oncologists in major Indian hospitals use.
- Optimized front-end rendering and core web vital performance scores by 10 points on the EHR web application.
- Developed a shared Internal Component Library for client-side React applications, reducing code duplication by 20%.
- Implemented the first phase of the CRM dashboard on the MERN Stack with GraphQL improving back-end query time by 15%.
- Migrated front-end tooling to Vite to improve initial load performance by 3x making the developer experience smoother.

NUDOC Systems, Mumbai, India: Software Developer Intern January 2022 - October 2022

- Designed a web-based PDF editor system in React that increased document processing speed by 70%.
- Migrated front-end PDF processing tasks to a queue-based system, which reduced application memory usage by 50% and improved back-end PDF processing time by 10% through refactoring the PDF processing pipeline.
- Devised an efficient PDF archival strategy that reduced static storage costs by $1000 per year.
- Enhanced a PDF processing pipeline with real time logging using web sockets to improve logs streaming latency by 30% over REST on HTTPS.
- Wrote unit and end-to-end test cases to test high-value features in Jest and Cypress, achieving 80% code coverage.

ACADEMIC PROJECTS

Stock Trading Application | An application to simulate a real-time stock market

- Engineered a full stack web app and IOS app to simulate a real time trade platform with trade latency of 100ms.
- Simulated features like real time trading and portfolio management and metric analysis to provide insights on trading patterns and stock trends.
- Optimized trade API performance to simulate live transactions reducing response times by 50% .

Smart Fridge System | A cross platform mobile application to monitor fridges

- Engineered a React Native Cross platform application with Redux for state management to, Monitor Fridge Data, recommend up to 200 recipes based on fridge content and provide nutritional data of items across 10 cuisines.
- Built a food item data-set with 4000 labelled food items for training the image detection model.
- Dockerized the back-end and ML servers and created a deployment pipeline and sped up app release times by 10%.

Air France Cargo Challenge | An algorithm to efficiently pack air cargo

- Bagged the best presentation award from a panel of 10 aviation experts for the web application demo.
- Implemented an efficient algorithm to place cargo in containers and pallets, to optimize centre of gravity and save fuel by up to 5%.
- Developed a web dashboard to track the algorithm efficiency, the resulting fuel savings and environmental impact.