HARSH JAIN

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EDUCATION

Masters Of Science In Computer Science   December 2023 - December 2025
University Of Southern California , Los Angeles , California
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, HTML/CSS ,SQL, Shell
Frameworks: React , Angular , Django Rest Framework , Node.Js & Express ,React Native , Flask , Xcode
Technologies: Git , AWS, Docker , NGINX , MongoDB , SST , Serverless, 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 multiple client-side React applications, reducing code duplication by 20%.
• Implemented the first phase of the CRM dashboard on the MERN Stack with GraphQL.

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.
• 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.
• Simulated features like real time trading and portfolio management and metric analysis.
• Optimized trade API performance to simulate live transactions reducing latency 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 upto 200 recipes based on fridge content and provide nutritional data of items.
• 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 for faster app releases.

Plantopia | A vegetation cover monitoring Web Application

• Built a data-set for the classification of land area in the Mumbai region into by web scraping and manual sampling & trained a ML model to classify land area into 4 classes.
• Devised a script to make polygons on map surfaces and export them as GIFs to represent changes in Normalized Difference Vegetation Index (NDVI) via a time-lapse over a data of 20 years.

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

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