

HARSH JAIN

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EDUCATION

Masters of Science in Computer Science

University Of Southern California , Los Angeles , California
Coursework: Web Development , Analysis of Algorithms

December 2023 - December 2025

3.7 GPA

Bachelors of Information Technology

K.J. Somaiya College Of Engineering , Mumbai , India

Coursework: Object Oriented Software Engineering , Operating Systems , Database Systems

August 2019 - June 2023

9.2 GPA

TECHNICAL SKILLS

Programming: Typescript , Javascript , Python , Java , 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

- Enhanced EMR application performance for oncologists in major Indian hospitals by leveraging MongoDB's aggregation pipeline, achieving a 30% API performance boost amidst scalability challenges from increasing patient data.
- Developed a shared Internal Component Library for client-side React applications & migrated front-end developer tooling to Vite, reducing code duplication by 20% & improving initial load performance by 3x for the web application.
- Implemented the first phase of the CRM dashboard on the MERN Stack to allow for custom task workflow creation and management for hospital Kevats thereby removing dependency from heterogeneous PM tools.

NUDOC Systems, Mumbai, India: Software Developer Intern

January 2022 - October 2022

- Devised a React-based PDF management system to combat sluggish document processing, achieving a 2x reduction in processing time via automated file organization and streamlined workflows for repetitive tasks.
- Migrated front-end PDF editor processing tasks to a queue-based system, resulting in a 50% reduction in application memory usage , faster task processing speed & expanded hardware compatibility.
- Optimized PDF archival strategy, duplicating frequently accessed files to the main server and transferring less frequently used documents to static storage, resulting in a 20% annual reduction in block storage costs.
- Executed real-time logging using web sockets enabling live updates on back-end processing tasks' progress.

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 to allow users to trade with accurate data from the real markets.

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

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

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

- Created an efficient algorithm to place cargo in containers and pallets, to optimize centre of gravity and save fuel by up to 5%, using a combination of a greedy & divide and conquer approach.
- Crafted a web dashboard to track and compare the algorithm efficiency, the resulting fuel savings and environmental impact for a better user experience.
- Bagged the best presentation award from a panel of 10 aviation experts for the web application demo.