HARSH JAIN

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EDUCATION

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

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

EXPERIENCE

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

- Led the development of a shared Internal Component Library for all client side **React** applications.
- Translated client requirements into features for the CRM product.
- Developed the first phase of the in house analytics dashboard and on the MERN Stack with **GraphQL**.
- Optimized front-end performance on web apps by migrating from Create React App to **Vite**.
- Improved back-end query & front-end rendering performance for the **EHR** application used by Oncologists.

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

- Designed the UI & UX , developed the front end in **React** and deployed a web based PDF editor system which increased document processing speed by **70%**.
- Migrated front-end PDF processing tasks to a queue based system and reduced application memory usage by **50%** and reduced back-end PDF processing time by **40%** by implementing distributed image processing strategy.
- Liaised to archive legacy data on cost-effective servers thereby reducing PDF storage costs by **$1000** per year.
- Wrote unit,integration,end to end test cases for high value features in Jest and **Cypress**.

ACADEMIC PROJECTS

Smart Fridge System | A cross platform mobile application to monitor fridges   smartfridge.harshjain.live

- 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.
- Implemented a custom authentication back-end to provide compatibility with **Firebase** authentication token.
- 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 deployed the application on **AWS Elastic Beanstalk**.

Plantopia | A vegetation cover monitoring Web Application   plantopia.harshjain.live

- Collaborated with **3** developers to develop 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.
- 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.

TECHNICAL SKILLS

Programming: Typescript , Javascript , Java , HTML/CSS , Python ,SQL, Shell
Frameworks: React , Django Rest Framework , Node.Js & Express ,React Native , Flask
Technologies: Git , AWS, Docker , NGINX , MongoDB , SST , Serverless, GraphQL

HACKATHONS

Amadeus Labs AF/KLM Cargo Challenge   An international competition to make air travel sustainable.

- Led a team of **6** developers to implement the challenge in a period of **24** hrs.
- Implemented an **efficient** algorithm to place luggage and other cargo in containers and pallets, to optimize centre of gravity.
- Developed a REST API and **Web Application** to return the results.
- Presented the solution in the final round to a panel of **10** industry experts.