

# JAY JHAVERI

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## EDUCATION

### Masters of Computer Science

Sept 2022 – June 2024 (Expected)

University of California, San Diego (UCSD)

CGPA: 3.97/ 4

*Relevant Courses:* Software Engineering, Advanced Data-Driven NLP, Deep Learning, Distributed and parallel systems

### Bachelor Of Engineering (Computer Engineering)

August 2018 – July 2022

Vivekanand Education Society's Institute of Technology (VESIT)

CGPA: 9.013/ 10

*Relevant Courses:* Machine Learning, Natural Language Processing, Artificial Intelligence, Web Development, DBMS, OS

## INTERNSHIP EXPERIENCE

### Graduate Student Researcher, Ujima S&P Lab

March 2023 – Present

- Building a "Smart Mirror" on Raspberry Pi using VGG-Face TF-Lite Model, trained on 100,000 images, to detect ethnicity, address the existing biases in CV datasets, and contribute to the public domain via user feedback.
- Developed a rule-based security chat assistant using Rasa in an unstructured, fast-paced startup-like environment.

### Machine Learning & Cyber Security Intern, Legendary Entertainment

June 2023 – Dec 2023

- Created a shortcut dashboard that reduced the total time taken by the SOC analyst from 80 minutes to about 4 minutes daily in tracking user-anomaly events by integrating Splunk Dashboard and Azure MSGraphs APIs via Python Scripting.
- Maintained a high level of security while streamlining a user's authentication process by integrating a FIDO Alliance product into the existing SAML/OIDC SSO workflow.
- Assisted the VP of security in laying the foundation of a next-gen universal anomaly and user-behavior detection platform based on LLMs in collaboration with Sky High Security by building a prototype in Splunk.

### Full Stack Development Intern, Makos Infotech (Startup)

June 2021 – August 2021

- Integrated and developed server-side code using JQuery, PHP, and MySQL for a small and versatile team targeting the automation of the On-campus placement process agile methodologies.
- Created and merged relational databases using MySQL workbench and deployed it on AWS RDS to develop a college-student-company social network inspired by Facebook's friend system.
- Established a mentorship-onboarding program for new undergraduate interns, aligning them with the existing codebase and processes, saving the company at least 1 week of time and effort.

### Web Developer Intern, VESIT Renaissance Cell

June 2020 – July 2020

- Led the design and development of a Django-based [Paper Publication Web service](#) for 50 professors hosted on [Heroku](#), serving approximately 250 CSE students.
- Developed a [Portfolio Website template](#) using HTML/CSS/JS and Bootstrap, deployed on Google's Firebase.

### Data Analyst Intern, Leadingindia.ai

May 2020 – July 2020

- Collaborated with a team of four to develop a vaccine prediction model for H1N1 and seasonal flu vaccines, accurately predicting public acceptance trends (41%) for the COVID-19 vaccine, securing first place among 85 intercollege peer groups.
- Published a [research paper](#) in IACC 2020 & authored a [blog](#) highlighting the correlation between H1N1 and COVID-19 pandemics.

## PROJECTS

### Alt Bot for Mastadon: An automatic image alt generation bot ([Github](#))

Sep 2023 – Dec 2023

- ✓ Developed a REST-API based Chrome extension in JS to help visually impaired people browse decentralized social media feeds by leveraging hugging face image captioning models to generate alternative image descriptions.
- ✓ Deployed 3 levels of custom cache system to ensure efficient performance with minimal lag complemented with testing scripts.

### MedLM: Exploring Language Models for Medical QnA Systems ([Github](#))

March 2023 – Aug 2023

- ✓ Led a team of 4 to fine-tune language models (e.g., Bloom, T5, GPT-2) on the MedQuad dataset, in collaboration with Microsoft researcher Dr. Asma Ben Abacha, comparing performance against larger models (GPT-3.5, GPT-4) through dynamic prompting.
- ✓ Implemented ROUGE and BLEU metrics and conducted human surveys for doctors and patients to evaluate the models.

### Divya-Drishhti: An Independent Aid for the Visually Impaired

Aug 2020 – May 2021

- ✓ Achieved a 400% net cost reduction by creating a real-time Voice-activated AI-IoT accessible android application to help Visually Impaired People (VIPs) comparable to state-of-the-art OrCam in detecting currency, objects, and scenes.
- ✓ Published a [research paper](#) highlighting the needs of VIPs, funded by the Mumbai University Minor Research Grant.

### International Flutter Hackathon: Healthy While Distant ([Github](#))

June 2020 – 48 Hours

- ✓ Developed a Flutter/Dart app using Bluetooth Low Energy (BLE) technology to help users maintain social distancing during COVID-19, alerting them when within six feet of another device.
- ✓ Secured a top 150 position out of all participating teams worldwide.

### Automated Number Plate Recognition and Parking System

Dec 2019 – Feb 2020

- ✓ Built an Android-Java app connected to a Firebase server to automate security and monitor space availability in parking systems.
- ✓ Utilized OCR on existing CCTVs to detect number plates at entry and exit gates, improving parking management efficiency.

## SELECTED RESEARCH PUBLICATIONS

Inampudi S., Jhaveri J. et al., (2021) **Machine Learning Based Prediction of H1N1 and Seasonal Flu Vaccination**. Advanced Computing. IACC 2020. Communications in CIS, vol 1367. Springer, Singapore. [DOI.org Link](#)

**Skills:** Python, Pytorch, Tensorflow, Android-Java, HTML/CSS, Javascript, C, Java, Docker, Git, Linux, GCP, Azure, AWS, Firebase