

## EDUCATION

**Masters of Computer Science**

Sept 2022 – June 2024 (Expected)

University of California San Diego (UCSD)

CGPA: 3.979/ 4

*Relevant Courses:* Software Engineering, Advanced Computer Vision, Deep Learning, Scalable Data/ML Systems, Algorithms**Bachelor Of Engineering (Computer Engineering)**

August 2018 – July 2022

Vivekanand Education Society's Institute of Technology (VESIT)

CGPA: 9.013/ 10

*Relevant Courses:* Natural Language Processing, DBMS, Big Data (Hadoop), Distributed Computing, Cloud Compute, OOPs (Java)

## EXPERIENCE

**Machine Learning NLP and CV, Ujima S&P Lab, UCSD**

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.
- Led 4 freshers through the Early Research Program in analyzing privacy data for AR games using TF-IDF and K-means Clustering.

**Data Analyst & 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 an early startup targeting the automation of the On-campus placement process using 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 Springer & authored a [blog](#) highlighting the correlation between H1N1 and COVID-19 pandemics.

## PROJECTS

**Inquirable Models: Increasing Explainability in Health-AI using LLM**

Sep 2023 – Jan 2024

- Conducted a two-phase exploratory study using prompt engineering techniques on leading Large Language Models (LLMs) with SHAP values to improve the interpretability of traditional medical risk models and reduce patient risk.
- Facilitated surveys with doctors and patients to assess answer quality, focusing on metrics such as confabulation rate.
- Paper's poster accepted for presentation at the AMIA 2024 Annual Symposium.

**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 (Bloom, T5, GPT-2) on the MedQuad dataset in collaboration with Microsoft researcher Dr. Asma Ben Abacha.
- Compared performance against GPT-3.5 and GPT-4 using Dynamic Prompting with Retrieval Augmented Documentation (RAG) via medical InstructOR Embeddings on the patient questions.
- Increased the ROUGE and BLEU scores by 10% using a Bert Classifier to give extra contextual awareness to the models.

**Divya-Drishti: 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 android application to help Visually Impaired People (VIPs) comparable to state-of-the-art OrCam in detecting currency, objects, and scenes utilizing GCP's Vertex AI.
- Published a [research paper](#) highlighting the needs of VIPs, funded by the Mumbai University Minor Research Grant.

## 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, SQL, Java, Django, Pytorch, Tensorflow, Neural Networks, REST, Splunk, JS, C, Docker, Linux, Git, AWS, Azure, GCP