**Education**

**Masters of Computer Science Sept 2022 – June 2024 (Expected)**

University of California, San Diego (UCSD) CGPA: 3.97/ 4

*Relevant Courses*: Advanced Computer Vision, Deep Generative Modelling, Deep Learning, Scalable ML 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, Artificial Intelligence, Software Development, Natural Language Processing

**Internship Experience**

*Cyber Security & Machine Learning Intern,* **Legendary Entertainment**  **June 2023 – Dec 2023**

* Reduced false positive anomaly detection time by 10x by Streamlining employee online activity monitoring using Splunk Dashboard, Python scripting and integration with Azure MSGraph API.
* Contributed to integrating a FIDO Alliance product into the SSO workflow, enhancing security and user experience.
* Assisted the lead SOC analyst in foundational work for the Shared Learning Intelligence Platform (SLIP) to improve anomaly detection in security cloud brokers in collaboration with Sky High Security.

*Full Stack Development Intern,* **Makos Infotech**  **June 2021 – July 2021**

* Developed Server-side rendering for their main website (Jobaskit.com) utilizing JQuery, PHP, and MySQL, which targets automating the On-campus placement process for various colleges.
* Managed existing and created relational databases using MySQL Workbench and deployed them on AWS.
* Worked on the website's front-end design using the prototyping tool Figma, followed by Bootstrap.
* Co-pitched the online job placement portal, Jobaskit, to 3 University professors alongside the founder.
* Mentored 2 intern recruits working on the digitalization of the teaching process.

*Data Analyst Intern,* **Leadingindia.ai May 2020 – June 2020**

* Worked in a team of four to build a Vaccine Prediction model on the H1N1 and seasonal flu vaccines to accurately predict the trends of the public acceptance rate (41%) of the Covid-19 vaccine.
* [Research Paper](https://doi.org/10.1007/978-981-16-0401-0_11) was published in Springer & I wrote a [Blog](https://medium.com/@jjhaveri1906/pandemics-a-harsh-reality-7c05254e907b) showcasing the correlation between the two pandemics.
* Secured first position for the mentioned research project amongst 85 peers intercollege.

**Projects**

[**Inquirable Models: Increasing Explainability in ML using LLM**](https://docs.google.com/presentation/d/1naydNzz6F8W51bA40Phez4-Pj2b-vJRJmUHkOp5rO1M/edit?usp=sharing) **Sep 2023 – Jan 2024**

* Explored the possibility of making traditional medical risk models more easily interpretable using Large Language models with the help of SHAP values, ultimately reducing the patient’s risk.
* Conducted exploratory research with the help of prompt engineering on popular LLMs in a 2 stage manner.
* Hosted surveys for Doctors and Patients to evaluate the answers generated on metrics such as Confabulation rate.

[**MedLM: Exploring Language Models for Medical QnA Systems**](https://arxiv.org/abs/2401.11389) **March 2023 – Aug 2023**

* Led team of 4 in fine-tuning diverse language models (e.g., bloom, t5, gpt2) on the MedQuad dataset, comparing them with larger models (gpt3.5, gpt4) using direct questions and dynamic prompt engineering.
* Collaborated with Microsoft researcher Dr. Asma Ben Abacha, creator of MedQuad dataset, for expert guidance.
* Utilized ROUGE, BLEU metrics and conducted human surveys for doctors and patients to evaluate the model.

[**Semantic Segmentation using Transfer-Learning and U-Net**](https://github.com/AGhafaryy/Deep-Learning-Pattern-Recognition-/tree/main/PA3/PA3) **Jan 2023 – Feb 2023**

* Implemented pixel-level segmentation using a pre-trained Resnet-18 and U-Net architecture, including a weighted loss on the PASCAL VOC-2007 dataset. Evaluated using pixel accuracy and intersection over union (IoU) metrics.
* Achieved a pixel accuracy of 74.4% and an IoU of 15% by utilizing transfer learning with a modified ResNet18 model.

[**Divya-Drishti: An Independent Aid for the Visually Impaired**](https://github.com/JayJhaveri1906/Divya-Drishti) **Aug 2020 – May 2021**

* Achieved a *400%* net cost reduction by creating a 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.
* Funded by the Mumbai University Minor Research Grant Program.
* Published a [research paper](https://dx.doi.org/10.2139/ssrn.3867707) highlighting the needs of VIPs.

**Selected Research Publications**

**Jhaveri, J.**, Gupta, A., Chhabria, P., Ochani, N. and Sengupta, S., 2021. **Divya-Drishti: An Independent Aid for the Visually Impaired**. *SSRN Electronic Journal*. [DOI.org Link](https://dx.doi.org/10.2139/ssrn.3867707)

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](https://doi.org/10.1007/978-981-16-0401-0_11)

**Technical Skills:** Python, PyTorch, OpenCV2, Javascript, SQL, Splunk, Linux, Git, AWS, Google Cloud, Azure, Firebase