**Education**

**Masters of Computer Science Sept 2022 – Dec 2023 (Expected)**

University of California, San Diego (UCSD) CGPA: 3.96/4

*Relevant Courses*: Advanced Computer Vision, Deep Learning, Scalable ML Systems, Recommendation Systems

**Bachelor Of Engineering (Computer Engineering) August 2018 – July 2022**

Vivekanand Education Society’s Institute of Technology (VESIT) CGPA: 3.75/4

*Relevant Courses*: Machine Learning, Object Oriented Programming, Analysis of Algorithms, Data Structures

**Internship Experience**

*Cyber Security & Machine Learning Engineer,* **Legendary Entertainment** **June 2023 – Present**

* Working on aggregating multiple related and unrelated data sources into a single place using SPLUNK.
* Designing an ML solution to create a universal user behavioral and anomaly detector across multiple applications.

*Graduate Student Researcher,* **Ujima Security and Privacy Research Lab** **June 2023 – Present**

* Mentoring 4 Undergraduates via the Early Research Student Program (ERSP) on a Computer Security and Privacy project related to upcoming AR/VR technology.
* Leading a team in developing a security-based generative and rule-based chatbot

*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.
* Co-pitched the online job placement portal, Jobaskit, to 3 University professors alongside the founder.

**Projects**

**Conversational QnA between Doctor-Patient March 2023 – Present**

* 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 prompt engineering.
* Collaborated with Microsoft researcher Dr. Asma Ben Abacha, creator of MedQuad dataset, for expert guidance.
* Utilized ROUGE, BLEU metrics and conducted user surveys for doctors and patients to evaluate model performance.

**GrooveGenie: A copyright-free music generator March 2023 – Present**

* Created an open-source music generation model, utilizing Facebook’s EnCodec Transformer model to compress audio wav files to an embedding that can be understood by the model.
* Training a conditioned GAN network that generates music based on user-provided genre inputs embedded using the BERT model, with a goal of creating only copyright and royalty-free music, being trained on the FMA dataset.
* Trying out different, more efficient Diffusion/Transformer architecture to generate audio.

[**Game Genre and Recommendation Classification using Steam Reviews**](https://github.com/JayJhaveri1906/Game-Genre-and-Recommendation-Prediction) **Nov 2022 – Dec 2022**

* Designed data pipelines to preprocess and apply machine learning techniques to classify game genres and also personalize game recommendations using the user’s reviews and hours played.
* Out of N-gram, Multinomial NB, and Linear SVC, RF with Balanced data & TF-IDF gave the highest accuracy of 90.53%.

[**VisionNumpy: Computer Vision Applications**](https://github.com/JayJhaveri1906/Computer-Vision---1) **Sept 2022 – Dec 2022**

* Performed partially and completely bounded camera rectification with epipolar geometry used in 3D reconstruction.
* Implemented SLP, MLP, and CNN using Pytorch to perform classification on the MNIST dataset.
* Designed an image captioning deep learning algorithm using a CNN-LSTM architecture using the COCO dataset.
* Re-Implemented U-Net to perform semantic segmentation and compared it with transfer learning on ResNet18.

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

* Created a Voice-activated standalone A-IOT android application using Raspberry Pi4 to help Visually Impaired People (VIPs) accurately and efficiently detect Indian Currency notes, colors, and everyday objects.
* Funded by the Mumbai University Minor Research Grant Program.
* Received feedback, on the android-Java app developed, by National Association for the Blind (NAB)’s members.
* Achieved a *400%* net cost reduction compared to products made by OrCam.
* Published a [research paper](https://dx.doi.org/10.2139/ssrn.3867707) highlighting the needs of VIPs.

**Research Publications**

Inampudi S., **Jhaveri J.** et al., (2021) **Machine Learning Based Prediction of H1N1 and Seasonal Flu Vaccination**. In: Garg D., Wong K., Sarangapani J., Gupta S.K. (eds) Advanced Computing. IACC 2020. Communications in Computer and Information Science, vol 1367. Springer, Singapore. (<https://doi.org/10.1007/978-981-16-0401-0_11>)

**Additional Information**

**Technical Skills:** Python, PyTorch, Tensorflow, OpenCV2, Computer Vision, AI/ML, NLP, OOPs, IOT, AWS, Google Cloud