# 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*: Deep Learning, Scalable ML Systems, Recommender Systems, Computer Vision, Adv NLP - LLMs
**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, Software Development, Big Data (Hadoop), Algorithms, Cloud Computing

## INTERNSHIP EXPERIENCE

*Machine Learning & Cyber Security Intern,* **Legendary Entertainment**                   **June 2023 – Dec 2023**
- Reduced false positive anomaly detection time by 10x by Streamlining employee online activity monitoring by integrating Splunk Dashboard and Azure MSGraphs APIs via Python Scripting.
- 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 backend rendering for their main website's UI 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.

*Data Analyst Intern,* **Leadingindia.ai**                                                 **May 2020 – June 2020**
- Worked with 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 was published in Springer & I wrote a Blog showcasing the correlation between the two pandemics.
- Secured first position for the mentioned research project amongst 85 peers intercollege.

## PROJECTS

**Alt Bot for Mastadon: An automatic image alt generation bot**                            **Sep 2023 – Jan 2024**
- ✓ Developed a Chrome extension to help the visually impaired browse decentralized social media by leveraging hugging face image captioning ML models to generate alternative descriptions for images in posts.
- ✓ Deployed 3 levels of custom cache system to ensure peak and efficient performance with no lag.
- ✓ Collaborated in a 10-member team, envisioning the potential to significantly simplify the search for specific media.

**MedLM: Exploring Language Models for Medical QnA Systems**                             **March 2023 – Aug 2023**
- ✓ Led a 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.
- ✓ Implemented ROUGE, BLEU metrics and conducted human surveys for doctors and patients to evaluate the model.

**GrooveGenie: A copyright-free music generator**                                       **March 2023 – June 2023**
- ✓ 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.
- ✓ Trained 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.

**Game Genre and Recommendation Classification using Steam Reviews**                       **Nov 2022 – Dec 2022**
- ✓ Designed data pipelines to preprocess and apply machine learning techniques to classify the game's genre, user's sentiment and finally curated a personalized game recommendation system using user reviews.
- ✓ Achieved 90.53% accuracy with RF, balanced data & TF-IDF, outperforming N-Gram, Multinomial NB, Linear SVC.

**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.
- ✓ 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

**Technical Skills:** Python, PyTorch, TensorFlow, OpenCV, Hugging Face, Splunk, Docker, APIs, Azure, AWS, Google Cloud