**Education**

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

University of California, San Diego (UCSD) CGPA: 3.95/ 4

*Relevant Courses*: Advanced NLP, Scalable Data/ML Systems, Recommender Systems, Computer Vision

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

Vivekanand Education Society’s Institute of Technology (VESIT) CGPA: 9.013/ 10

*Relevant Courses*: Cryptography/System Security, Machine Learning, Computer Networks, Operating Systems

**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** **April 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 under Dr. Munyaka.
* 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.
* 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**

[**GrooveGenie: A copyright-free music generator**](https://github.com/JayJhaveri1906/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 wave files to an embedding that the model can understand.
* 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 Machine Learning techniques to classify game genres and determine user recommendations such as reviews and hours played. Various models were tested, including N-gram, Multinomial NB, and Linear SVC. Random Forests with Balanced data gave the highest accuracy of 90.53%. *Tech Used:* Python, Pandas, TF-IDF, scikit-learn, TensorFlow

[**Aatmanirbhar Sanchar: Secure Self-Sufficient Communications**](https://github.com/JayJhaveri1906/Aatmanirbhar-Sanchar) **June 2021 – May 2022**

* Led a team of 4 to design and develop an off-the-grid, cross-platform secure multimedia-supported chat application.
* Followed a CI/CD approach to build a client-server architecture with the server based on python and React JS.
* Made in collaboration with the Tata Institute of Fundamental Research (*TIFR*) to be used within the organization.
* Implemented SHA-256 and AES-256 overlapped inside an HMAC envelope to fight off any kind of cyber attacks.

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

* Created a Voice-activated standalone AIOT 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>)

**Technical Skills:** Python, PyTorch, TensorFlow, Cyber-Security, MS Office, Linux, Java, AWS, Google Cloud, Firebase