**Education**

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

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

*Relevant Courses*: Software Engineering, Advanced Data-Driven NLP, Deep Learning, Scalable Data/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*: Natural Language Processing, Database Management Systems, Web Development, Operating Systems

**Internship Experience**

*Graduate Student Researcher,* **Ujima S&P Lab**  **March 2023 – Present**

* Built a "Smart Mirror" on Raspberry Pi using VGG-Face Model to detect ethnicity, address the biases in CV datasets, and contribute to the public domain via user feedback.
* Developed a rule-based security chat assistant using Rasa in an unstructured, fast-paced startup-like environment.
* Led 4 undergraduates through the Early Research Student Program in analyzing privacy data for MMO AR/VR games using TF-IDF and K-means Clustering.

*Machine Learning & 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 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.

*Full Stack Development Intern,* **Makos Infotech**  **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.
* 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.
* Led 2 new recruits in overhauling the website’s existing design using tools like Figma and React JS.
* Pitched and demoed the online job placement portal to 3 University board members alongside the founding CEO.

*Web Developer Intern*, **VESIT Renaissance Cell** **June 2020 – July 2020**

* Led design and development of a Django-based [Paper Publication Website](https://github.com/JayJhaveri1906/Django_Website_publications/) for newly published work of Professors from the university hosted on [Heroku](https://cmpn-publications-official.herokuapp.com/).
* Developed a [Portfolio Website template](https://jayjhaveri190600.web.app/) using HTML/CSS/JS and Bootstrap, deployed on Google’s Firebase.

**Projects**

**[Alt Bot for Mastadon: An automatic image alt generation bot](https://docs.google.com/presentation/d/1smZzOd8u-NhgbotJRkn2Eqw5WmXVxA-XSB0afzxaNWE/edit?usp=sharing)** [(Github)](https://github.com/CSE210-Fall23-Team2/AltBot) **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 peak and efficient performance with minimal lag.

[**MedLM: Exploring Language Models for Medical QnA Systems**](https://arxiv.org/abs/2401.11389)[(Github)](https://github.com/JayJhaveri1906/CSE291_MedLM) **March 2023 – Aug 2023**

* Led a team of 4 to fine-tune language models (e.g., Bloom, T5, GPT-2) on the MedQuad dataset, in collaboration with Microsoft researcher Dr. Asma Ben Abacha, comparing performance against larger models (GPT-3.5, GPT-4) through dynamic prompting.
* Implemented ROUGE and BLEU metrics and conducted human surveys for doctors and patients to evaluate the models.

**[Aatmanirbhar Sanchar: Secure Self-Sufficient Communications](https://doi.org/10.1007/978-3-031-18497-0_41)** [(Github)](https://github.com/JayJhaveri1906/Aatmanirbhar-Sanchar) **June 2021 – May 2022**

* Led a team of 4 to develop a secure, multimedia-supported chat application for the Tata Institute of Fundamental Research, integrating off-the-grid functionality for internal use.
* Utilized CI/CD practices to establish a client-server architecture leveraging Python, Node JS, and React JS.
* Implemented SHA-256 and AES-256 overlapped inside an HMAC envelope to protect against cyber attacks.

[**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 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](https://dx.doi.org/10.2139/ssrn.3867707) highlighting the needs of VIPs funded by the Mumbai University Minor Research Grant.

[**“Mental Health Messiah” Twitter Bot**](https://github.com/JayJhaveri1906/Mental-Health-Messiah) **June 2020 – Aug 2020**

* Developed sentiment analysis app using IBM-Cloud API, Twitter API, Python, Angular to help COVID related mental health issues.

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

**Technical Skills:** Python, SQL, Java, Javascript, HTML/CSS, React, Django, PostgreSQL, Android, Linux,Git, PyTorch, AWS, Azure, GCP, Firebase