

## EDUCATION

<b>Masters of Computer Science</b>	<b>Sept 2022 – Dec 2023 (Expected)</b>
University of California, San Diego (UCSD)	CGPA: 3.95/ 4
<i>Relevant Courses:</i> Advanced Computer Vision, Deep Generative Modelling, Advanced Data-Driven Text Mining (NLP), Computer Vision, Deep Learning, Scalable Data/ML Systems, Recommender Systems, AI: Probabilistic Reasoning	
<b>Bachelor Of Engineering (Computer Engineering)</b>	<b>August 2018 – July 2022</b>
Vivekanand Education Society's Institute of Technology (VESIT)	CGPA: 9.013/ 10
<i>Relevant Courses:</i> Machine Learning, Big Data Analytics (Hadoop), Software Development, Data Warehouse and Mining, Natural Language Processing, Data Structures, DBMS, Cryptography/System Security	

## INTERNSHIP EXPERIENCE

<b>Full Stack Developer, Stealth Startup</b>	<b>Feb 2023 – Present</b>
<ul style="list-style-type: none"> <li>Integrating Python-based DL architecture to a user-friendly Web Application utilizing AWS and React JS.</li> <li>Secured \$100K in funding in AWS credits from Adobe.</li> </ul>	
<b>Full Stack Development Intern, Makos Infotech</b>	<b>June 2021 – July 2021</b>
<ul style="list-style-type: none"> <li>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.</li> <li>Managed existing and created relational databases using MySQL Workbench and deployed them on AWS.</li> <li>Worked on the website's front-end design using the prototyping tool Figma, followed by bootstrap.</li> <li>Co-pitched the online job placement portal, Jobaskit, to 3 University professors alongside the founder.</li> <li>Mentored 2 intern recruits working on the digitalization of the teaching process.</li> </ul>	
<b>Web Developer Intern, VESIT Renaissance Cell</b>	<b>June 2020 – July 2020</b>
<ul style="list-style-type: none"> <li>Led and managed a team of 6 during the entire duration of the internship.</li> <li>Worked on designing and implementing a Django based <a href="#">Paper Publication Easy-to-use Website</a> for my college, wherein teachers can easily add their newly published work for the students to see.</li> <li>Developed a <a href="#">Portfolio Website</a> for our mentor.</li> </ul>	
<b>Data Analyst Intern, Leadingindia.ai</b>	<b>May 2020 – June 2020</b>
<ul style="list-style-type: none"> <li>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.</li> <li><a href="#">Research Paper</a> was published in Springer &amp; I wrote a <a href="#">Blog</a> showcasing the correlation between the two pandemics.</li> <li>Secured first position for the mentioned research project amongst 85 peers intercollege.</li> </ul>	
<b>App Developer, Dalvik Apps</b>	<b>Dec 2019 – Jan 2020</b>
<ul style="list-style-type: none"> <li>Designed a Car Coin Collection game using C Sharp (C#) and created a UI-friendly library management system.</li> <li>Built an Android app using Android-Java as a substitute for default calling &amp; messaging apps</li> </ul>	
<b>Data Analyst Intern, Núclei Technologies</b>	<b>Dec 2018 – Jan 2019</b>
<ul style="list-style-type: none"> <li>Applied several supervised ML algorithms such as Linear regression &amp; random forest in R &amp; Python to predict sales of products at specific BigMart store locations based on previous sales data.</li> </ul>	

## PROJECTS

<b><a href="#">Self Driving Car</a></b>	<b>Feb 2023 – March 2023</b>
Built a self-driving car using QLearning and Deep Q-Network on the PyGame GUI.	
<b><a href="#">Semantic Segmentation using Transfer-Learning and U-Net</a></b>	<b>Jan 2023 – Feb 2023</b>
Pixel-level segmentation on the PASCAL VOC-2007 dataset using various models and techniques like weighted loss. The evaluation metrics were pixel accuracy & intersection over union (IoU). The best results were obtained using transfer learning with a modified ResNet18 model, achieving an IoU of 15%, pixel accuracy of 74.4%. <i>Tech Used: Python, PyTorch</i>	
<b><a href="#">Game Genre and Recommendation Classification using Steam Reviews</a></b>	<b>Nov 2022 – Dec 2022</b>
Designed Machine Learning techniques to classify game genres and determine user recommendations such as reviews, hours played. Various models were tested, including N-gram, Multinomial NB, and Linear SVC. Random Forest with Balanced data gave the highest accuracy of 90.53%. <i>Tech Used: Python, Pandas, TF-IDF, scikit-learn, TensorFlow</i>	
<b><a href="#">VisionNumpy: Computer Vision Applications</a></b>	<b>Sept 2022 – Dec 2022</b>
<ul style="list-style-type: none"> <li>Building an image captioning deep learning algorithm using a CNN-LSTM architecture using COCO dataset.</li> <li>Implemented edge detection and Shi-Tomasi corner detection from scratch with NMS and Hysteresis thresholding.</li> <li>Implemented SIFT feature matching with fundamental matrix using epipolar geometry and RANSAC.</li> <li>Implemented partially and completely bounded camera rectification with epipolar geometry.</li> <li>Implemented SLP, MLP and CNN using Pytorch to perform classification on MNIST dataset.</li> <li>Implemented U-Net to perform semantic segmentation and compared it with transfer learning on ResNet16.</li> </ul>	

# JAY JHAVERI

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## Aatmanirbhar Sanchar: Secure Self-Sufficient Communications

June 2021 – May 2022

In collaboration with the Tata Institute of Fundamental Research (TIFR), developed an off-the-grid secure (SHA-256) chat application without using any third-party APIs in the light of recent data piracy issues. *Tech Used: Python, React JS.*

## Divya-Drishti: An Independent Aid for the Visually Impaired

Aug 2020 – May 2021

Created a Voice-activated standalone IOT application using Raspberry Pi4 to help Visually Impaired People accurately detect Indian Currency notes, colors, and everyday objects. The project was funded under the Mumbai University Minor Research Grant Program. Received feedback from the members of National Association for the Blind (NAB). Achieved a 400% in net cost reduction compared to products made by OrCam. *Tech Used: TensorFlow, OpenCV2, Google Cloud, Raspberry Pi, Android-Java, Linux, Python. Achievement: Published a [research paper](#) highlighting the needs of VIPs.*

## Code for Change Hackathon: A Data Extraction project

Nov 2020 - 24 hours

Developed data extracting software for Global Parli Foundation NGO to automate the translation of Land/Farm ownership papers' pdf originally in Devanagari Script into an editable excel sheet using OCR. *Tech Used: Django, Google Cloud, Html/CSS. Achievement: Secured **First** position for the data extraction project amongst the 72 teams participating.*

## "Mental Health Messiah" Twitter Bot

June 2020 – Aug 2020

Leveraged sentiment analysis to build a bot to help people suffering from mental health issues related to COVID-19. *Tech Used: IBM-Cloud API, Twitter API, Python, React JS, Angular JS*

## Automated Number Plate Recognition and Parking System

Dec 2019 – Feb 2020

Built android application connected to a Firebase server, to automate security and space availability in car parking systems by monitoring the number plates detected at the exits, utilizing already installed CCTVs at the entry and exit gates of parking lots. *Tech Used: Tesseract OCR, Firebase, Android-Java, Python*

## International Flutter Hackathon: Healthy While Distant

June 2020 - 48 hours

Devised a user-friendly Flutter app that leveraged smartphones' existing Bluetooth Low Energy (BLE) technology to help users maintain social distancing during the COVID-19 pandemic. The app alerts the user if they come within six feet of another smartphone and includes an additional feature of teaching yoga moves to stay fit while quarantining. *Tech Used: Flutter, Dart, BLE. Achievement: Secured top 150 positions amongst all the teams participating worldwide.*

## RESEARCH PUBLICATIONS

Jhaveri, J., Gupta, A., Chhabria, P., Ochani, N. and Sengupta, S., Dugad, S., (In Press). **Aatmanirbhar Sanchar: Self-Sufficient Communications**. International Conference on Intelligent Cyber Physical Systems and Internet of Things. ICoICI 2022. Engineering Cyber-Physical Systems and Critical Infrastructures, ECPSCI vol 3. Springer (<https://link.springer.com/book/9783031184963>)

Jhaveri, J., Gupta, A., Chhabria, P., Ochani, N. and Sengupta, S., 2021. **Divya-Drishti: An Independent Aid for the Visually Impaired**. SSRN Electronic Journal. (<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**. 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](https://doi.org/10.1007/978-981-16-0401-0_11))

## ADDITIONAL INFORMATION

- **Technical Skills:** Python, PyTorch, TensorFlow, OpenCV2, SQL, Java, C, Javascript, AWS, Google Cloud, Firebase, HTML/CSS, Android-Java, React JS, Django, PostgreSQL, Linux, Android Studio, Flutter, Object Oriented Programming, Git