

# NIRAV KISHOR JAIN

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## Education

### University of Southern California, Los Angeles

Jan 2022–Dec 2023

Master of Science, Computer Science

### Dwarkadas J. Sanghvi College of Engineering, Mumbai

Jul 2017–Jun 2021

Bachelor of Engineering, Computer Engineering

CGPA: 9.36/10

## Technical Skills

- **Languages and tools** - C, C++, Java, Python, JavaScript, R, Shell Scripting, Microsoft Word, Excel, Outlook
- **Development** – Django, Spring Boot, ReactJS, HTML, CSS, Bootstrap, MySQL, MongoDB, NodeJS, Jules, Jenkins, Raven
- **Machine Learning** – Tensorflow, Keras, PyTorch, ScikitLearn, NumPy, Pandas, Matplotlib, Seaborn, OpenCV, Dialogflow

## Work Experience

### Software Engineer, JP Morgan & Chase, Mumbai, India

Jul 2021–Nov 2021

- Developed and applied logic for deal closure on JPMC's cloud service using Java Spring Boot, React.js, and Kubernetes as a part of modernization team in Dealworks application of the Corporate and Investment Bank.
- Provided real-time support to Dealworks clients worldwide with application issues within one month of joining the team.
- Led a team of five people to the finals in JPMC's internal hackathon by creating an efficient bot for virtual stock market trading.

### Software-Engineering Intern, JP Morgan & Chase, Bangalore, India

Jun 2020–Jul 2020

- Programmed a website for an NGO with Java Spring Boot and ReactJS to facilitate efficient event organization.
- Designed a scheduler for the platform and reduced 5-6 hours of event scheduling by the NGO to a few clicks.

### Deep Learning Research Intern, Cerelabs, Mumbai, India

Jun 2019-Jul 2019

- Implemented, trained, and tuned two models i.e., Faster-RCNN and PSE-Net for table detection and line item (cell) detection from scanned documents having statistical tables.
- Tuned the Faster-RCNN model to achieve a final accuracy of 87% from an initial accuracy of 65% and achieved an accuracy of 84% in row and column detection with PSE-NET.

## Projects

### 3DFace

- Implemented a conditional GAN with a Markovian discriminator and a U-Net based generator to generate 3d point clouds from 2d face images.
- Trained the generator by deploying a weighted L1 loss and adversarial loss on the AFLW2000-3D dataset where the point clouds were generated leveraging 3DDFA on the dataset. The generator had a final loss of 0.44.

### FarmEasy

- Collaborated with a team of four people to build a platform to help farmers by predicting rainfall using an LSTM network for time-series prediction and suggesting crops based on region, soil, and the amount of predicted rainfall.
- Created a platform with graphical visualizations, news feed, a chatbot and a Web RTC- based video calling system using Python-Django and ReactJS.

### Face & Emotion Recognition

- Trained a model to recognize faces using the FisherFaces algorithm and detect faces using a pre-trained Haar Cascade classifier.
- Developed a CNN to recognize emotions from a video stream using Keras and OpenCV.

## Research Experience

### Conditional GAN with One-Dimensional Self-Attention for Speech Synthesis, Springer, Paper, [PDF](#).

Presented in "International Conference on Sustainable Computing and Intelligent Systems"

### Application of Deep Learning in Counting WBCs, RBCs And Blood Platelets Using Faster Region-based Convolutional Neural Network, Taylor & Francis, Chapter, [PDF](#).

Chapter in Book "Design of Intelligent Applications using Machine Learning and Deep Learning Techniques"

## Leadership and Involvement

- Won 2<sup>nd</sup> prize in Codeshashtra 5.0, a 24-hour hackathon.
- Reached semi-finals of e-yantra robotics competition by IIT-Bombay.
- Winner of college qualifier round for the Smart India Hackathon.
- Mentee and mentor at DJ-Unicore, a committee that helps sophomores make products for the college.
- Organized Internship fairs, hackathons, workshops, industrial visits, etc. as the co-events head at DJ-ACM