

# Rohan Deo

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## EDUCATION

### Carnegie Mellon University

Master of Science in Electrical and Computer Engineering

Selected Coursework: Introduction to Machine Learning for Engineers, Optimization, Data Analytics, Big Data Science

Pittsburgh, PA

May 2023

### D.J. Sanghvi College of Engineering, University of Mumbai

Bachelor of Engineering – Electronics and Telecommunication

GPA: 9.63/10 (Department Rank: 2<sup>nd</sup>)

Mumbai, India

October 2020

## SKILLS

**Programming Languages:** *Advanced* – Python; *Intermediate* – Java, C, SQL; *Basic* – C++

**Frameworks:** Scikit-learn, TensorFlow, Keras, PyTorch, Seaborn

**Application Software:** *Advanced* – MATLAB; *Basic* – AutoCAD, OrCAD

**Languages:** English (Fluent), Hindi (Fluent), Marathi (Native Speaker)

## PROFESSIONAL EXPERIENCE

### Capximize India Pvt. Ltd.

*Artificial Intelligence Intern*

Mumbai, India

2020 – 2021

- Developed a search logic and AI enabled **Recommendation System** for an online B2B platform to match buyers with sellers
- Collaborated with the development team to implement **Search Engine Optimization** on the platform using Elasticsearch queries, resulting in a micro-second search speed for more than fifty applied filters
- Teamed up with the Product Manager to design **wireframes** in Balsamiq for buyer forms
- Received recognition from the CTO for exemplary performance for contribution in multiple technical domains

### SmartKnower

*Data Science Internship*

Mumbai, India (Remote)

July – August 2020

- Led a team of 3 interns in performing **Analysis** and **Visualization** of recent Covid-19 data, as well as **Time Series Forecasting** to predict the nature of the virus' curve
- Obtained a model of **92% accuracy** while predicting second wave of Covid-19 infections in France

## PROJECTS

### Warning System for Drivers with Object and Facial Expression Detection

Carnegie Mellon University

Pittsburgh, PA

Summer 2022

- Designed an Emotion Detection system for the driver's face using Deepface with a 97% accuracy
- Wrote a custom CNN model for efficient Drowsiness detection (eye closure and yawning) for the driver with 98.75% accuracy
- Optimized the code for deployment on a Jetson Xavier AGX

### Automated Waste Segregation using Robotic Arm

D.J. Sanghvi College of Engineering, University of Mumbai

Mumbai, India

2019 – 2020

- Led a group of four in implementing an Image Processing algorithm to classify solid waste into four subtypes namely wood, paper, plastic and glass, deploying Residual Neural Networks, **achieving 93% model accuracy**
- Designed and constructed an Arduino-controlled **Robotic Arm** to physically segregate solid waste
- Resulted in an efficient alternative to RFID based-segregation, achieving roughly **30% cost optimization**
- [https://technojournal.djsceietesf.com/wp-content/uploads/2020/04/DJSPARK\\_2020.pdf](https://technojournal.djsceietesf.com/wp-content/uploads/2020/04/DJSPARK_2020.pdf)

### Fire Detection and Intensity Using Neural Networks

D.J. Sanghvi College of Engineering, University of Mumbai

Mumbai, India

2019

- Employed a Convolutional Neural Network to establish a '**Flame Color Feature Model**' (FCFM) to learn the color features of flames according to HSI Model; resulting in fire, and its intensity being detected with **97% accuracy**
- Represented flame intensity by four colors – green, yellow, orange and red, for better visualization

## ORGANIZATIONS

**Member**, Humans for AI - Remote

July 2019 - present

**Member**, Institution of Electronics & Telecommunication Engineers - Mumbai

July 2017 – June 2019