

Noor Chauhan

B.E. in Artificial Intelligence and Data Science

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CURRENT EDUCATION:

Bachelor of Engineering

MARCH 2022 - PRESENT

I am pursuing my B. Engineering degree, doing my majors in Artificial Intelligence and Data Science

PROJECTS:

Basic Lane detection pipeline— *Computer Vision*

I developed a basic lane detection pipeline project, where the algorithm detects straight lines defined in the region-of-interest. I got to learn the basics of how to calculate straight lines and the matrix mathematics behind finding lines using pixel manipulation.

Twitter Sentiment Analysis— *Data Analysis*

I developed a Sentiment Analysis of tweets to analyze and distribute tweets according to different classes and help analyze the market sentiments according to the tweets data. This project was completed along with my 4 other friends as a hackathon submission

DeepFake audio Detection— *Machine Learning*

Along with my friends I also developed a DeepFake audio detection algorithm using Mel Frequency Cepstral coefficients technique by analyzing the features of the input audio file.

Traffic Sign Recognition— *Machine Learning*

During my Semester break I decided to learn traffic sign recognition and I built my first CNN model to recognise and classify traffic signs based on the German Traffic Sign Recognition Benchmark Dataset. I also evaluated the model with the accuracy of 98%.

Traffic Sign Detection— *CV and Machine Learning*

For the enhanced version of this project, I built a real time traffic sign detection and recognition pipeline that is capable of taking an input from the camera and detecting and classifying traffic signs with an astonishing mAp of 95%.

Potholes Detection — *CV and Machine Learning*

During a 24-Hour Hackathon contest, my friend and I built a real time pothole detection algorithm using the latest Classification model of “You Look Only Once”. We built a driver’s assistance feedback system using a simple LED and a esp32 dev board that lights up the LED when it detects a pothole. This project won the III place in the hackathon

Imitation Learning (Behavioral Cloning)— *Machine Learning*

I also started my journey to understand CNN with a behavioral cloning Machine Learning algorithm that can predict precise steering angle of a car with just a camera input.

RESEARCH INTEREST(PROJECTS):

1. Developing an open-pothole dataset that defines a heatmap and plots open potholes on the map. This is to solve the real-world problem of potholes in the Mumbai Metropolitan Region
2. Developing a light-weight Neural Network Architecture inspired by roundworms to calculate steering angle of a car using a Camera input.

LANGUAGE SPOKEN:

1. English - Expert
2. German - Beginner

ACADEMIC PAPER:

1. Currently unpublished [Submitted for peer review] , Noor Mohd. Chauhan, Prof. Arunkumar Mishra & Abhsihek Sanjay Khadgi, **Optimising Pothole detection precision using Yolov8**

MY OVERVIEW:

My area of interest revolves around computer vision, robot control, casual structure and Generalist Intelligence models.

MY PROFILES:

Github: <https://github.com/noorchauhan>

Kaggle : <https://www.kaggle.com/noorchauhan>

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