Sanchit Lamba

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Education

Manipal University Jaipur — Jaipur, RJ
Bachelors of Technology in Computer Science and Engineering, Hons. in AI and ML — *Aug. 2022 – May 2026*

Experience

Technical Instructor — January 2023 – April 2023
Camp K12 — *Remote*

- Taught basics of python OOP to students ranging from clsses 8th to 12th on an hourly rate

Freelance — June 2023 – Present
Multiple clients — *Remote*

- Freelance work for multiple clients in field of web development and animation

Projects

Autonomous Vehicle Guidance System | *Python, CARLA, Keras, Tensorflow* October 2023 – November 2023
sanchit.cc/avgs — github.com/avgs

- Ingestion of data from the simulated lidars and cameras was done using a simple numpy array and opencv respectively.
- The RGBA data from OpenCV was then passed onto a CNN that simulated the camera data gathered from the car and the surrounding enviroment.
- A reinforcement learning model was fed all of the pre-processed input data, which included LiDAR point clouds and visual features from the CNN. By processing the combined sensor inputs, this model made used Proximal Policy Optimization (PPO), which allowed the system to continuously interact with the simulated environment and learn the best driving behaviors.
- The reinforcement learning model was designed with a reward system that penalized crashes and dangerous driving behaviors while periodically rewarding safe navigation and adherence to traffic rules.

Drowsiness detection system | *OpenCV ,numpy,matplotlib* September 2023
sanchit.cc/dds — github.com/dds

- Trained a model to detect drowsiness among drivers to avoid crashes
- The model detects yawns and how open the eye is and gives out a drowsiness score to the driver
- Input data from the cameras is convoluted turned into an array after feature extraction is done
- The real time data gathered from multiple images is fed into the model trained using sample datasets sourced from kaggle with marked images

Technical Skills

Languages: Python , Basic JavaScript, HTML/CSS
Developer Tools: Git, Docker, Azure, Bash
Libraries: pandas, NumPy, Matplotlib, Tensorflow, OpenCV, Matplotlib, Keras, PyGame,