Arav Jain

+91-7982345857 | aravjain63@gmail.com | linkedin | github | leetcode

Education

Delhi Technological University Nov 2022 - Jun 2026
B.Tech in Mathematics and Computing ***CGPA:8.56***

AISSCE/CBSE (Class XII) 2022
Montfort Sr. Sec. School,New Delhi ***95.8%***

Experience

AI Research Intern June 2024 - July 2024
SPARK, IIT,Roorkee (Summer Research Intern Programme) ***Poster*** |***Demo***

- Developed and implemented a method to measure vehicle lateral shift in real-time using a dash-mounted monocular camera, **reducing costs by up to 80%** compared to traditional LIDAR and depth-based cameras.
- Enhanced ADAS functionality on Indian unmarked roads by integrating modern deep learning, traditional computer vision, and RANSAC methods, improving results by 30%.
- Achieved 96% accuracy and a Mean Absolute Percentage Error of 7%, significantly enhancing road safety.

Projects

Website for SIAM-DTU | *Web Development, NextJS, SCSS* Github | Demo

- Built the official website for SIAM-DTU and used dynamic routing feature of NextJS for blogs webpage.
- Integrated **Google Scripts API** used to create a contact form and generated 20+ leads.

Tennis Game Analyser | *Pytorch, Python, YOLO, numpy, Object Detection, Deep Learning* Github | Video

- Engineered precise measurements of player velocities, ball speeds, and shot counts by leveraging Convolutional Neural Networks (CNNs) to pinpoint court key points and infer in real time at **30 fps**.
- Trained **YOLO** on a custom dataset and employed a CNN architecture for key point extraction.

Neural Style Transfer | *Pytorch, Python, VGG-16, Streamlit* Github | Video

- Re-engineered the original style transfer paper methodology, referring to the paper link for guidance.
- Leveraged a pre-trained VGG16 model to extract style and content from two images and applied modifications to surpass the **original benchmark results by 20%.**

Technical Skills

Languages: C/C++, Python, JavaScript SQL, HTML/CSS,
Libraries/Frameworks:Django, Flask, React, NextJS, Pytorch, TensorFlow, Scikit-Learn, OpenCV, Matlab, FastAi
Database/Tools: MySQL, MongoDB, Streamlit, HuggingFace, Docker
Technical Skills: Deep Learning, Machine Learning, Natural Language Processing, Computer Vision, Data Structure and Algorithms, Generative AI, Web Development
Relevant Coursework: Data Structures and Algorithms, Discrete Mathematics, Probability and Statistics, Algorithm Design and Analysis, Linear Algebra, Object Oriented Programming

Certifications

Machine Learning Specialisation | *Supervised Learning, Unsupervised Learning, Learning Algorithms*

Deep Learning Specialisation | *GenAI,CNN,Natural Language Processing,Reinforcement Learning*

Achievements

- Participated in Execute 3.0 hackathon.
- **Pupil** on Codeforces with a rating of **1250**.
- Solved **250+** problems on various platforms like LeetCode and GeeksforGeeks.
- Secured a department rank of 20 out of 185 students.

Extra Curriculars

- *D*epartment Head at Society for Industrial and Applied Mathematics-DTU
- *O*utreach Head at Rotaract Club of DTU Regency