

RAHUL RAJ

☎ [+91-8789260648](tel:+91-8789260648) ✉ 22ev3022@rgipt.ac.in  [Rahul Raj](#)  [rahul-04-raj](#)  [rahulraj.site](#)

EDUCATION

Rajiv Gandhi Institute of Petroleum Technology

2022 – 2026

(An *Institute of National Importance* along the lines of *IITs*)

Amethi, Uttar Pradesh, India

B. Tech in Electrical Engineering (Major : E -Vehicle) - CPI - 7.67/10

PUBLICATIONS

Wi-GESTO: Wi-Fi based Gesture Sensing via Teacher-Student Method , Submitted

- Developed Wi-GESTO, a Wi-Fi-based gesture recognition system using a Knowledge Distillation framework.
- Trained a compact Student model from a large Teacher model, enhancing performance with intermediate feature map and output alignment.
- Achieved top accuracies on two public CSI datasets with the smallest model size.
- Validated model on a Raspberry Pi edge device for runtime efficiency.
- Future work includes exploring attention-based sub-networks for further model optimization.

PROJECTS

Hackathon Project: Text extraction and prediction from images using LLMs 

Sep, 2024

- Implemented a hybrid approach combining OCR (Tesseract and EasyOCR) with advanced NLP (fine-tuned LLaMA 3.1 model).
- Used both Google's Tesseract and EasyOCR to extract text data from images, ensuring we captured as much information as possible.
- Fine-tuned the Meta's LLaMA 3.1 8B model to predict quantities and units based on the extracted text.
- Achieved Top 200 ranking among 74k+ participants in the Amazon ML Challenge 2024 with this solution.

Real-Time Face Detection using TensorFlow and Python 

Dec, 2023

- Developed a Deep learning face detection model using TensorFlow's Functional API, optimizing architecture for real-time performance, and employing a custom loss function and optimizer for efficient learning.
- Successfully collected and annotated a diverse dataset using OpenCV and LabelMe for training the model
- Successfully tested the model in real-time detection scenarios, achieving accurate and reliable results, showcasing its potential for deployment in practical applications.

Google Looker Studio Retail Sales Dashboard 

Jun, 2024

- Developed an interactive dashboard using Google Looker Studio to analyze retail sales data.
- Implemented various visualizations including scorecards, time series plots, bar charts, pie charts, and geographic plots to represent KPIs and trends.
- Utilized scorecard KPIs with time comparisons to track performance over time.

TECHNICAL SKILLS

Languages:

Python, SQL, C and C++

Libraries:

NumPy, OpenCV, Pandas, Matplotlib, Seaborn, Scikit-learn

Technologies/Frameworks:

TensorFlow, Linux, MicroPython, GitHub, Google Looker Studio, Tableau, WSL2, MATLAB

ACHIEVEMENTS

- JEE Advanced 2022 Qualified
- Runner-Up in Momentum Event in Technex 2023(Annual Technical Fest, IIT BHU)
- Runner-Up in Robo Soccer Event in URJOTSAV 2023(Annual Technical Fest, RGIPT)