

# PREM RAICHURA

+91 9327681649 | [premrachura7@gmail.com](mailto:premraichura7@gmail.com)

[Github](#) | [Linkedin](#) | [Portfolio](#)

## PROFILE SUMMARY

Full-Stack and AI Developer with a strong focus on building intelligent, scalable, and user-centric solutions. I enjoy transforming complex ideas into clean, functional systems — from robust backend architectures to intuitive frontend interfaces. My experience spans across AI/ML-driven applications, deep learning research, and web development using technologies such as FastAPI, React, PHP, Python, and MySQL.

## EDUCATION

### L.D.R.P. Institute of Technology and Research.

Bachelor of Engineering in Computer Engineering.

2024-2027

### Government Polytechnic Porbandar.

Diploma in Computer Engineering. - CGPA: 7.09

2020-2023

## SKILLS

- **Backend:** Php, Laravel, Python, Django, Flask, RESTful APIs, Java, SQL, C, C++
- **Frontend:** React.js, Bootstrap, Tailwind CSS, JavaScript, HTML/CSS
- **ML/DL Frameworks:** TensorFlow, PyTorch, Pandas, NumPy, OpenCV, Keras
- **Version Control:** Git, GitHub, Docker
- **Database:** MySQL, Firebase
- **Others:** Postman, Vscode

## COURSEWORK

**Core Concepts:** Data Structures and Algorithms, Operating Systems, OOP, DBMS, Computer Networks

## EXPERIENCE

### ROUND TRIP RIDE

10 OCT 2022 – 3 NOV 2022

> Role: Backend Developer

- ◇ Built and optimized a responsive vehicle rental platform with real-time availability, booking, and review features.
- ◇ Developed backend logic and APIs using Core PHP, ensuring secure data handling and seamless frontend integration with HTML, CSS, Bootstrap, and JavaScript.

## PUBLICATION

### TRAFFICEYE: INTELLIGENT TRAFFIC OPTIMIZATION USING DEEP LEARNING APPROACH



> Published in IEEE International Conference on Artificial Intelligence and Machine Vision (AIMV 2025)

- ◇ Built and evaluated an AI-driven traffic optimization system using YOLOv5s on the IITM-HeTra dataset for real-time vehicle detection and analysis.
- ◇ Achieved 71 % detection accuracy with 1.4 ms inference time, surpassing YOLOv4, YOLOv7, and YOLOv8 models in performance.
- ◇ Optimized the deep learning pipeline for adaptive signal control and intelligent traffic management.
- ◇ Contributed to model development, experimentation, and results validation, leading to successful publication in IEEE AIMV 2025.

# PROJECTS

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## TRAFFIC DENSITY & DETECTION WEB APP



> *React + vite, FastAPI, YOLOv5s, AI/ML*

- ◇ Developed a real-time traffic monitoring web app using FastAPI, React + vite, and YOLOv5s trained on the IITM-HeTra dataset.
- ◇ Achieved 71 % accuracy and 1.4 ms inference through an AI/ML-optimized pipeline for real-time traffic analysis.

## WEALTH EQUITY



> *React + vite, Tailwind CSS, Email.js*

- ◇ Developed the official WealthEquity website using React, Vite, and Tailwind CSS with a responsive, animated UI for an engaging user experience.
- ◇ Integrated Email.js for automated inquiries, boosting engagement and contributing to a 5+ client increase through improved digital presence.

## PROMPT-INJECTION-PREVENTION



> *Python, pytorch, ViT*

- ◇ Developed a hybrid AI safety system using rule-based filters and a ViT classifier to detect unsafe prompts, achieving 98.32% accuracy.
- ◇ Trained and optimized a Vision Transformer (ViT) hybrid model on labeled prompt datasets to identify harmful patterns and enhance LLM safety with high reliability.

## BOLTON REAL ESTATE



> *Php, MySQL, PHPMailer*

- ◇ Developed and managed a fully responsive real estate website with an integrated admin panel for property management using Core PHP and MySQL.
- ◇ Implemented secure backend logic, dynamic property listings, and contact functionality to enhance usability and streamline client-side operations.

# ACHIVEMENTS

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## PROJECT GRANT - SECUREPARK



> *M. M. Patel Students Research Project Cell, KSV*

## RESEARCH PAPER GRANT - TRAFFICEYE



> *M. M. Patel Students Research Project Cell, KSV*

# CERTIFICATIONS

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- ◇ NPTEL - PYTHON FOR DATA SCIENCE.
- ◇ BASIC & ADVANCE PYTHON.

