

PREM RAICHURA

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

PROFILE SUMMARY

A Full-Stack & 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, Android, 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

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, PhPMailler*

- ◇ 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

RESEARCH PROJECT GRANT



› *Titled "SecurePark — The Real Edge AI, Vision and IoT-based campus security and Parking ecosystem for KSV."*

- ◇ Awarded a project grant of ₹69,017/- by M. M. Patel Students Research Project Cell, KSV

RESEARCH PAPER GRANT



› *Titled "TrafficEye: Intelligent Traffic Optimization Using Deep Learning Approach."*

- ◇ Awarded a conference grant of ₹2,500/- by M. M. Patel Students Research Project Cell, KSV

CERTIFICATIONS

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

