

MANTHAN RAJPUROHIT

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Portfolio: manthan-rajpurohit.vercel.app

PROFESSIONAL SUMMARY

Computer Engineering undergraduate specializing in Full-Stack Backend Systems and Agentic AI Architecture. Experienced in engineering event-driven microservices with FastAPI, Node.js, PostgreSQL, and stateful AI agents using LangGraph and Anthropic Model Context Protocol (MCP). Proven track record in open-source development (merged PRs) and competitive hackathons (Onsite Finalist at Odoo India HQ).

EDUCATION

GIDC Degree Engineering College (GTU)

Bachelor of Engineering (B.E.) in Computer Engineering

Navsari, Gujarat, India

Expected May 2029

EXPERIENCE & OPEN SOURCE

FlyRank AI — [Machine Learning Engineering Intern \(Certificate Link\)](#)

July 2026 – September 2026

- Engineered automated Python data extraction pipelines to evaluate organic search ranking patterns and indexing metrics.
- Developed AI-driven search visibility modules, optimizing feature extraction pipelines using scikit-learn and REST APIs.
- Collaborated on deploying automated content evaluation scripts to support real-time growth analytics.

FitMart OSS — Open Source Contributor

2026

- Authored and merged [Pull Request #436](#) implementing Zod runtime schema validation across core API endpoints.
- Integrated Jest unit test suites to validate incoming API request payloads, reducing runtime edge-case failures.

PROJECTS

RecoverAI — Event-Driven AI Payment Recovery Engine

[\[GitHub Link\]](#)

FastAPI, LangGraph, Python, PostgreSQL, Gemini API, Docker

- Engineered an event-driven payment recovery platform utilizing LangGraph stateful AI agents to automate failed transaction retries.
- Integrated Gemini API to dynamically generate personalized customer recovery notifications based on failure reason codes.
- Designed FastAPI backend microservices with PostgreSQL schema validation, containerized using Docker for scalable deployment.

TransitOps — Smart Transport Operations Platform

[\[GitHub Link\]](#)

FastAPI, PostgreSQL, React, TypeScript, SQLAlchemy, JWT, Tailwind CSS

- Built a full-stack fleet management platform at Odoo Hackathon 2026 featuring vehicle lifecycle management and driver dispatching.
- Implemented 10+ critical business logic rules at API level, including double-booking prevention and status auto-updates.
- Structured role-based access control (RBAC) with JWT authentication and PostgreSQL backend models using SQLAlchemy ORM.

TerraPulse AI — Environmental Telemetry Dashboard

[\[GitHub Link\]](#)

React, TypeScript, FastAPI, PostgreSQL, scikit-learn, Leaflet, Recharts

- Developed a real-time environmental telemetry dashboard integrating scikit-learn regression models for predictive AQI forecasting.
- Built interactive geospatial mapping interfaces using Leaflet and TypeScript to visualize regional air quality metrics.
- Architected RESTful API endpoints in FastAPI to serve real-time sensor streams and historical climate datasets.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, C

Backend & Databases: FastAPI, Node.js, Express.js, REST APIs, PostgreSQL, SQLAlchemy, Prisma, JWT Authentication

AI & Machine Learning: LangGraph (AI Agents), Model Context Protocol (MCP), Gemini API, scikit-learn, OpenCV

Frontend & Tools: React, Vite, TypeScript, Tailwind CSS, Docker, Git, GitHub, Linux, Postman

HONORS, AWARDS & CERTIFICATIONS

- Odoo Hackathon 2026 (Odoo India HQ):** Onsite Finalist — Built *TransitOps* enterprise platform under 24h constraints.
- Solution Challenge 2026 (Google / Hack2Skill):** Prototype Finalist — Built AI environmental telemetry prototype.
- Anthropic Certifications:** Model Context Protocol (MCP) & Subagent Architectures | Claude Code Engineering (2026).
- AWS & IBM Certifications:** AWS Academy Machine Learning Foundations | IBM AI & Web Development (2026).