Anshum Dev

AI / ML Engineer | Software Engineer

Ahmedabad, India | anshum25506@gmail.com | linkedin.com/in/anshum25
github.com/Anshum25 | theanshumdev.site

SUMMARY

AI/ML and backend software engineer (B.Tech CS&T, graduating Jun 2027). AI Intern at NivaSync Infotech, building an enterprise Retrieval-Augmented Generation (RAG) assistant with Large Language Models (LLMs), Qdrant and FastAPI services secured by JSON Web Token (JWT) auth and Role-Based Access Control (RBAC), plus ERPNext customization. Primary contributor to Swachh Safar 2.0, a team-built offline-first Progressive Web App (PWA) and Android app for Indian Railways with on-device biometric attendance and CI/CD gated by 493 automated tests.

EDUCATION

B.Tech, Computer Science & Technology Aug 2023 – Jun 2027 (Expected)
L.J. Institute of Engineering & Technology | Ahmedabad, Gujarat

TECHNICAL SKILLS

Languages: Python (Pandas, NumPy), TypeScript, JavaScript, SQL, Java

AI / ML: Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Embeddings, Vector Databases (Qdrant), Prompt Engineering, LangChain, OpenAI APIs, Vision LLMs, Optical Character Recognition (OCR), Natural Language Processing (NLP), Scikit-learn, XGBoost, Logistic Regression, Explainable AI (SHAP)

Backend & Databases: FastAPI, Pydantic, REST API Design, JWT Authentication, RBAC, Node.js, Express.js, PostgreSQL, MySQL, MongoDB, SQLite (WASM / OPFS)

Frontend & Mobile: React, Next.js, Vite, Tailwind CSS, PWA, Service Workers, Capacitor (Android)

DevOps & Testing: Git, GitHub Actions CI/CD, Docker, Linux, nginx, AWS (Basics), pytest, Vitest, Playwright

ERP: ERPNext, Frappe Framework (v16), Workflow Automation, Custom Reports, Server & Client Scripts

PROFESSIONAL EXPERIENCE

AI Intern, NivaSync Infotech Pvt. Ltd. Apr 2026 – Present | Ahmedabad

- Built an enterprise AI assistant using RAG that answers questions over organizational documents and data, combining embeddings, Qdrant semantic search with metadata filtering and API-based LLM inference.
- Developed modular FastAPI REST APIs for authentication, chat, document retrieval, conversation history, pagination, analytics and reports, secured with JWT and role-based document access on the retrieval path.
- Designed synchronization pipelines that index thousands of enterprise records for semantic search, and optimized SQL queries and backend performance to improve retrieval speed.
- Customized ERPNext across Manufacturing, Quality, Inventory, Purchase, Sales, HR and Training modules with custom reports, workflows, dashboards and business logic.

Full Stack Developer, SwiftFolios Aug 2025 – Oct 2025 | Ahmedabad

- Contributed responsive, reusable React and Tailwind CSS components to a startup's MERN-stack applications.
- Integrated REST APIs with authentication and authorization flows, managed data in MongoDB, tested and debugged APIs with Postman, and supported production deployments on AWS.

PROJECTS

Swachh Safar 2.0 – Offline-First Railway Operations Platform ehk.itfarmer.in | 2026

React, Vite, SQLite WASM (OPFS), PWA, Capacitor (Android), Kotlin, FastAPI, PostgreSQL, face-api.js, GitHub Actions

- Primary contributor on a small team building an offline-first cleanliness-operations platform for Indian Railways divisions: one React codebase ships as an installable PWA and a signed Android APK against a FastAPI and PostgreSQL backend, covering 8 modules (journeys, attendance, coach inspection, feedback, complaints, inventory, master data, reports).
- Offline architecture: a local-first data layer on SQLite WASM (OPFS); SQL triggers and composite foreign keys reject invalid records, and a transactional outbox with an audit trail syncs each record exactly once.

- Android and biometrics: on-device attendance with live-camera face matching (128-dimension descriptors via face-api.js) and USB-OTG fingerprint capture through a native Kotlin plugin, storing templates only, never images.
- Quality and delivery: GitHub Actions CI/CD gated by 300 device unit tests (Vitest) and 193 backend tests (pytest), with signed APK builds and over-the-air web updates; 11 offline Playwright end-to-end specs, and all 30 server reports reproduce exactly on-device.

TRMS AI Chatbot – Custom Enterprise Software Assistant

Python, FastAPI, MySQL, Qdrant, Ollama, Qwen 2.5 (OpenAI-compatible API), LangChain, Docker Compose

- Built a custom AI chatbot for a training institute's management software (TRMS) that lets staff ask plain-language questions across modules such as trainees, exams, attendance, hostel, mess, library and vehicles.
- Designed hybrid retrieval: a parameterized, role-scoped SQL query registry answers exact questions from MySQL, with Qdrant semantic search (Ollama embeddings) as a fallback and Qwen 2.5 composing the final response.
- Added guided follow-up flows with option buttons, role-based module access, short conversation memory, confirm-before-execute actions and downloadable reports, evolving the system from prototype to v2.

ERP AI Invoice Automation github.com/Anshum25/ai_erpnext

Python, FastAPI, Vision LLMs, OCR, ERPNext, Frappe, REST APIs

- Built a vision-LLM pipeline that extracts invoice fields and line items from images and PDFs, validates them and drafts ERPNext Sales Invoices, Purchase Invoices or Delivery Notes through Frappe APIs; every draft is held for human confirmation and never auto-submitted.

ManuscriptAI – AI Descriptive Answer Evaluation

Python, OCR, NLP, LLMs, FastAPI, React

- Built a platform that grades handwritten descriptive answer sheets (including Hindi): OCR, then semantic comparison against reference answers that scores concepts and reasoning rather than keywords.
- Added review and calibration workflows so teachers can correct grades and keep evaluation consistent.

Customer Churn Prediction Platform github.com/Anshum25/churn-platform

Python, Pandas, Scikit-learn, XGBoost, SHAP, FastAPI

- Built a churn-prediction pipeline (feature engineering, Logistic Regression and XGBoost) with per-customer SHAP explanations and a decision engine that turns each prediction into a business recommendation, served through a FastAPI inference service.

Chess Mentor AI github.com/Anshum25/ChessMentor

Python, FastAPI, Stockfish, LLMs, React, TypeScript

- Built a chess-coaching app where Stockfish evaluates positions and an LLM explains them (move analysis, tactics, opening guidance and post-game feedback), with a FastAPI backend and a React + TypeScript frontend.

Business Health Checkup – Frappe v16 App github.com/Anshum25/business_health_checkup

Python, Frappe Framework, ERPNext

- Built a Frappe v16 app for structured business assessments with scoring, gap analysis, improvement-action tracking and management reports.