

Ajitesh Tamrakar

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SUMMARY

B.Tech Computer Science (AI & ML) graduate who ships end-to-end AI products solo — a local-first RAG search engine, production WhatsApp agents, and computer-vision pipelines. Strong in Python/Django, LLM orchestration, and vector search; targeting AI/ML and software engineering roles.

EXPERIENCE

Software Development Engineering Intern — AI Automation

Aug 2025 – Oct 2025

Vaartalabs Technology

- Shipped a full-stack GenAI SaaS platform (Django REST Framework, React/TypeScript) generating brand-personalized marketing assets via n8n workflows (Gemini Vision + Imagen), compositing text and logos deterministically with Pillow over AI-generated backgrounds to eliminate unreliable AI-rendered text.
- Engineered a two-pass OpenCV pipeline detecting hand-drawn glass panels, paired with a bilingual EasyOCR + Google Cloud Vision cascade mapping dimensions to panel edges.
- Built production WhatsApp agents for booking (n8n + Google Calendar) and wholesale ordering (CrewAI + Medusa APIs), eliminating fabricated bookings by splitting the agent into tool-scoped sub-workflows.

SKILLS

Languages: Python, JavaScript, TypeScript, Java, SQL, Bash

AI / ML: Retrieval-Augmented Generation (RAG), vector search (pgvector, embeddings), LLM orchestration (Ollama, Gemini Vision/Imagen), agent frameworks (CrewAI, n8n), PyTorch, scikit-learn, OpenCV, EasyOCR, Google Vision

Web / Backend: Django, Django REST Framework (DRF), REST APIs, Flask, React, React Native, NumPy, Pandas, Pillow, Chart.js

Databases & Tools: PostgreSQL, pgvector, SQLite, Docker, Docker Compose, Git, GitHub, Postman, Linux

EDUCATION

Bachelor of Technology in Computer Science (AI & ML)

July 2026

The Lakshmi Narain College of Technology and Science, Bhopal

PROJECTS

Internet Expedition — Local-First AI Semantic Search Engine

May 2026 – July 2026

github.com/Ajitesh-Tamrakar/Internet-Expedition • Python, Django, PostgreSQL/pgvector, Ollama, Docker, Chrome MV3

Makes captured web content searchable by meaning, not keywords — fully self-hosted, all inference local.

- Built the ingestion pipeline: two-level map-reduce LLM tagging (JSON-Schema-constrained output), vision-model image captioning, and faster-whisper transcription.
- Implemented RAG-style retrieval over pgvector — sliding-window transcript chunking, per-chunk embeddings, cosine-distance SQL with best-chunk-per-document deduplication.
- Designed a provider-agnostic model layer swapping local models for cloud LLMs with a single config change via per-provider adapters.
- Containerized a 5-service Docker Compose worker claiming jobs via PostgreSQL row-level locking, fed by a Chrome MV3 extension capturing YouTube, X, LinkedIn, and articles.

FinSight — Native Android Finance Analytics App

February 2026

github.com/Ajitesh-Tamrakar/FinSight • React Native, TypeScript, Java (native module)

Turns a phone's SMS inbox into an automatic personal-finance dashboard — no bank API, no manual entry.

- Wrote a native Android module (Java) bridging React Native to the SMS Content Provider, feeding a read → parse → validate → export pipeline that rejects invalid transaction types and amounts.
- Implemented a KPI engine (expense ratio, savings rate, spending velocity, MoM/YoY) rendered in 5 chart types via custom React hooks.

LedgerFlow — Shop Analytics & Ledger

July 2025 – January 2026

github.com/Ajitesh-Tamrakar/LedgerFlow • Django, PostgreSQL, django-filter, Chart.js

Replaces a paper ledger with charts and a bill-photo archive.

- Modeled dealers, photographed-invoice bills, payments, and daily collections in Django, surfaced through a Chart.js trends dashboard.
- Implemented ORM-level time-series aggregation (TruncWeek/TruncMonth + Sum) for collection rollups, and a per-dealer statement view merging bills and payments into a running balance.