

RAVI BIST

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SUMMARY

Full-Stack AI Engineer specialising in production RAG pipelines, LLM integration, and multi-tenant systems. Built and deployed LLM-powered systems using FastAPI, Next.js, PostgreSQL, pgvector, and Groq on Vercel. Strong in async job queuing (ARQ), Redis caching, rate-limited API design, prompt engineering, and CI/CD. Final-year B.Tech CSE; available for Full-Stack AI Engineer, Backend Engineer, or AI/ML Engineer roles onsite or remote.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, Python, SQL

AI/ML: RAG Pipelines, LLM Integration (Groq), Prompt Engineering, HuggingFace, sentence-transformers, Vector Embeddings, OCR (Tesseract), scikit-learn

Backend: Node.js, Express.js, FastAPI, REST APIs, ARQ (async job queues), PyJWT, Pydantic

Databases: pgvector, PostgreSQL, MongoDB, Redis (Upstash), Supabase, Cosine Similarity Retrieval, Chunking Strategies

Frontend: Next.js 14, React.js, TypeScript, Tailwind CSS

Cloud & Delivery: Docker, GitHub Actions CI/CD, Vercel, Render, Supabase, Git, UptimeRobot

PROJECTS

MigrantShield | *RAG-Grounded Legal Verification for Migrant Workers* | [GitHub](#) | [Demo](#) 2026

- Architected a RAG-grounded legal verification system (FastAPI + Next.js 14) covering **8 jurisdictions** and **6 languages**, powered by Groq LLaMA 3.3 70B.
- Built jurisdiction-scoped retrieval: LLM detects employer's country, narrowing pgvector search over **529 legal chunks** — cut false-positive law matches by **~80%**, ensuring exact source-clause citations.
- Engineered a fault-tolerant async pipeline (ARQ + Redis) with JWKS-verified auth (Supabase) across **14 REST endpoints**; deployed via GitHub Actions CI/CD on Vercel + Render, **~8s per PDF**.

InsightForge_Dashboard | *Multi-Tenant AI Analytics Platform* | [GitHub](#) | [Demo](#) 2026

- Shipped a multi-tenant analytics platform with a pandas-driven pipeline turning raw CSV/Excel exports into forecasts, auto-detecting columns, duplicates, and outliers on upload.
- Built regression-backed forecasting — LinearRegression fits fresh per dataset for revenue, sales, inventory, churn, marketing ROI — improving accuracy by **~90%**, paired with Groq chat over company data.
- Engineered multi-tenant isolation (company_id from JWT folded into every query) across **24 REST endpoints**; rate-limited (slowapi, 10/min), deployed via GitHub Actions CI/CD — **~3s response time**.

Candid | *AI-Powered Career Gap Analysis Tool* | [GitHub](#) | [Demo](#) 2026

- Delivered Candid, a career-gap analysis tool (GitHub OAuth + multi-source aggregation via Supabase) cross-checking GitHub, resume, portfolio, and LinkedIn against a target JD.
- Built dual-scoped retrieval: JD embeddings (sentence-transformers/all-MiniLM-L6-v2 via HF Inference API) query two independent pgvector stores — **500+ job-posting chunks**, **18+ ATS-rule chunks** — preventing cross-contamination.
- Runs on Groq gpt-oss-120b for structured-JSON report generation, parsing PDF/DOCX resumes (pdfplumber, python-docx) across **12 REST endpoints** and 8 router modules — **~10s per analysis**.

EXPERIENCE

Independent Full-Stack AI Development Sep 2024 – Present

Self-directed

- Self-taught the full stack (FastAPI, Next.js, RAG, vector DBs) from scratch, then designed and shipped **3 production AI systems** (legal-tech, analytics, career-tools) solo, end to end.
- Owned architecture, backend, frontend, and deployment across **10+ technologies**, from design through production hosting on Vercel/Render with uptime monitoring.

EDUCATION

Roorkee Institute of Technology

B.Tech in Computer Science and Engineering (affiliated: Uttarakhand Technical University)

Uttarakhand, India

2022 – 2026

RESEARCH & RECOGNITION

IIT Bombay Certifications: 85th percentile (Java) and **88th percentile** (Python) nationally — two independently validated credentials outside coursework.

Languages: English (Professional), Hindi (Fluent), Nepali (Native).