

# Vansh Raja

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## ACADEMIC QUALIFICATION

**BTech CSE with spec. in Artificial Intelligence, Vellore Institute of Technology - Bhopal;**

Grade: 8.89; Aug 2025

## INTERNSHIPS

### Security Analyst, Virtual Galaxy Infotech Ltd., Nagpur

[Feb '26 – Current]

- Building Vaani, a real-time multilingual conversational AI agent with per-turn language switching across Hindi, English, and Marathi. Custom Sarvam AI STT/TTS patches on LiveKit with a modular language pack architecture.

**Tools Used:** LiveKit, Sarvam AI, Gemini, Python, FastAPI, React, WebRTC, Vite, Bun

### Security Analyst Intern, Virtual Galaxy Infotech Ltd., Nagpur

[Oct '25 – Jan '26]

- Built a RAG legal drafting system: ingested 5,000+ judgments into PGVector, ran PDF → metadata → chunking → embeddings, and served hybrid retrieval (vector + PostgreSQL FTS) with petition-aware drafting via Streamlit.
- Developed Windows/Linux DLP agents to monitor directories, clipboard, and PII; forwarded events in real time to a FastAPI backend with PostgreSQL, Redis, and OpenSearch for incident logging and policy actions.

**Tools Used:** RAG, PGVector, PostgreSQL, FTS, Python, FastAPI, Streamlit, Redis, OpenSearch, Windows, Linux, DLP, PII Monitoring

### Data Analyst Intern, PreProd Corp, Nagpur

[Nov '23 – Jan '25]

- Built an end-to-end MLOps pipeline for food demand forecasting (Kafka, DVC, MLflow, PySpark, Scikit-Learn).
- Delivered demo projects for the Opensrc program using PySpark, RAG, GAN, MobileNet, Redis, and CouchDB.
- Ran a 2-day buildathon at VIT Bhopal; built the AutoML MVP, mentored teams, and reviewed submissions.
- Led 20 interns across 6 teams to ship 30+ demos; acted as Scrum Master and kept sprints on track.

**Tools Used:** Kafka, DVC, MLflow, PySpark, Scikit-Learn, Pandas, Polars, RAG, GAN, MobileNet, Redis, CouchDB, Computer Vision, AutoML

## PROJECTS

### Vaani [[https://github.com/Vansh-Raja/ConversationalAI\\_VG](https://github.com/Vansh-Raja/ConversationalAI_VG)]

[Jan '26 – Present]

Real-time multilingual conversational AI agent built for Virtual Galaxy. Supports voice calls in Hindi, English, and Marathi with seamless mid-conversation language switching. Built on LiveKit Agents with custom Sarvam AI STT/TTS patches and a modular language pack architecture.

**Tools Used:** Python, LiveKit, Sarvam AI, Gemini, FastAPI, React, Vite, Bun, WebRTC

### BudgetThing [<https://github.com/Vansh-Raja/budgetthing-ios>]

[Jan '26 — Present]

An expense tracker and Splitwise-style trip splitter for iPhone. Built with Expo (React Native), Convex backend, and Clerk auth. Offline-first with real-time multi-device sync.

**Tools Used:** Expo, React Native, Convex, Clerk, SQLite, TypeScript

### Legal Drafting System [<https://github.com/Vansh-Raja/LegalDraftingSystem>]

[Oct '25]

Multi-Agent RAG system that auto-drafts legal replies from 2,000+ Indian court judgments. Features an AI pipeline with query planning, hybrid search (vector + keyword), and a filtration agent. Supports petition upload for precedent-based rebuttals and an advisory chat interface.

**Tools Used:** Python, PostgreSQL, PGVector, LangChain, Streamlit, Ollama, OpenAI, pdfminer

### SSHThing [<https://github.com/Vansh-Raja/SSHThing>]

[Dec '25]

A TUI SSH manager built with Go and Bubble Tea. Save, organize, and connect to SSH hosts securely—all from the terminal. Features encrypted storage (SQLCipher + AES-GCM), spotlight search, multi-device sync via GitHub, and macOS Finder mounts.

**Tools Used:** Go, Bubble Tea, SQLCipher, AES-GCM, TUI, macOS

### Data Loss Prevention [<https://github.com/effaaykhan/Data-Loss-Prevention>]

[Nov '25]

Proof-of-concept DLP system with cross-platform agents (Windows/Linux) that monitor files, clipboard, and USB devices. Detects sensitive data like Aadhaar numbers, API keys, and passwords. Features a React dashboard for live events, agent status, and policy management. Includes Google Drive integration.

**Tools Used:** Python, FastAPI, PostgreSQL, Redis, OpenSearch, Docker, Windows, Linux, React

## CERTIFICATIONS

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- “Privacy and Security in Online Social Media” by NPTEL, Apr '24
- “AI and ML” by Google Developers & SmartInternz, Nov '23
- “Applied Machine Learning in Python” by University of Michigan, Feb '23

## TECHNICAL SKILLS

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**AI & ML:** Scikit-learn, Polars, PySpark, Dask, H2O AutoML, PyCaret, TPOT, Langchain, Ollama, Matplotlib, Seaborn, Plotly, LLM APIs (Groq, OpenAI, Google AI), LiveKit, RAG, Prompt Engineering

**Frontend:** Tailwind CSS, Framer Motion, Vite, Radix UI, Streamlit, Dash

**Databases:** Hadoop, Kafka, SQL, PostgreSQL, Cassandra, MongoDB, Redis, Neo4j, CouchDB

**DevOps & Other:** Flask, FastAPI, MLflow, Docker, Oracle Cloud, Git, Scrum