Ayush Pandey

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Education

VIT Bhopal University, Bhopal, MP   Expected May 2026
B.Tech in Computer Science   *GPA: 8.56 / 10.0*

Work Experience/Contributions

Omdena   September 2023 – December 2023
Collaborator – AI Developer
- Collaboratively worked in a global team of seventy-five members to build a Python-based BRTS chatbot hosted on Hugging Face.
- Efficiently integrated a KD-Tree algorithm to optimize real-time nearest bus stop detection from user coordinates.
- Streamlined Bhopal BRTS data flow via scalable vector DBs, then containerized and automatically deployed with Docker.

Visakwik (Startup)   March 2025 – Present
Frontend & AI Integration Developer
- Collaborated with backend and AI teams to build an AI-powered visa automation platform that applies for visas across 35+ countries via a browser extension.
- Authored and assessed a scalable user interface in Next.js using MUI, improving usability and reducing user friction.
- Integrated automation flows between a Flask backend and browser extension to seamlessly manage visa form submissions.
- Contributed to the development of the company's second product, **KWKJob**—an automated job application tool—by integrating REST APIs, implementing PayU payment workflows, and collaborating on a scalable architecture in React (Vite).

Projects

- **Grocify Mart (Multivendor E-Commerce)** *(Next.js, Drizzle ORM, Vercel AI SDK)* Grocifymart.vercel.app   November 2023
  - Developed a Next.js 14 frontend that achieved a 95+ Lighthouse score and reduced initial load times by 40% through server-side rendering and code splitting.
  - Implemented an AI support system with Vercel AI SDK and Google Gemini, leveraging tool-calling to automate complex user workflows and cutting manual complaint handling by 90%.
  - Architected a secure, multi-tier authentication system using NextAuth.v5 and Drizzle ORM, enforcing granular, role-based access control across 30+ protected API endpoints and frontend routes.
  - Crafted dynamic, role-specific dashboards with 10+ reusable data visualization components using D3.js and ReactApexCharts, delivering actionable insights into sales and revenue analytics.

- **AI Bank Recommender** *(FastAPI, LangChain, Streamlit, Google Gemini, MySQL)* bankbaba.streamlit.app   March 2024
  - Innovated and executed a dual-chain LLM architecture that analyzes 35+ customer attributes to generate personalized recommendations from a catalogue of 36 banking products.
  - Built a full-stack solution supporting 100+ user profiles with FAISS vector search, and streamlined new user onboarding using Tesseract OCR for document ingestion.
  - Developed a robust data pipeline to automate ingestion of customer and product data from MySQL into the FastAPI backend for real-time analysis and recommendations.

- **Club Site with Certificates & Chatbot** *(Next.js, Hugging Face, Python, Google API)* Linpack.vercel.app   November 2024
  - Engineered a pipeline to generate unique QR-hash tickets for event participation, integrating verification system.
  - Automated creation and templated email delivery of 500+ personalized tickets in batch via the Gmail API.
  - Integrated a Hugging Face powered chatbot can handle 200 daily inquiries to deepen member interaction.

- **Fraud Detection AI System** *(Spring Boot, Kafka, MongoDB, OpenAI Embeddings)*   Ongoing
  - Processed 2–3 transactions per second with 96% detection accuracy using Spring-Boot Apache Kafka, ensuring reliable ingestion.
  - Integrated OpenAI Embeddings to detect fraudulent patterns in real time, reducing investigation time by 40%.
  - Leveraged MongoDB vector storage to manage millions of embeddings, achieving sub-50 ms query responses for instant alerting.
  - Implemented automated synthetic data generation pipeline producing over 1 million realistic transactions to improve training.
  - Designed an event-driven microservices framework with Docker and Kubernetes, enabling horizontal scaling and deployment.

Certifications

- Google IT Support Professional Certificate (Coursera)
- Cloud Computing (NPTEL) – Silver, 75% score

Profiles & Achievements

- Leetcode: 450+ solved, Guardian badge, 9th globally in Weekly Contest 437.
- Qualified through two rounds in Asyncs Reimagine hackathon to rebuild and animate ISRO and Bluestone ISRO & Bluestone

Technical Skills & Relevant Coursework

- **Languages & Frameworks**: Java, Python, C++, JavaScript, TypeScript, Next.js, React, Angular, Spring Boot
- **Databases & Tools**: PostgreSQL, MySQL, MongoDB, Git, VS Code, Hugging Face, Docker,Gemini

Leadership & Extracurricular

Linpack Club, VIT Bhopal   November 2023 - Present
President
- Managed and scaled a team from ten to fifty to organize three large-scale events—including one hackathon and three guest lectures—for over five hundred attendees, overseeing fund management, PR, and all event logistics.