

Ayush Rathod

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EXPERIENCE

Airport Authority of India | Industry Project

March 2024 - May 2024

Remote

- Built a low-latency streaming text generation API using **FastAPI** and **Python** with responses in **300-500ms**.
- Achieved **95% retrieval accuracy** via semantic chunking and **KMeans**-based clustering on large text datasets.
- Optimized transformer inference with **4-bit quantization**, boosting memory efficiency **4x** and speed **2x**.

Eduplus | Industry Project

Remote

- Engineered a **CSV-based chatbot** using **FastAPI** and **Python**, achieving response times of **50-100ms** for real-time interactions.
- Built an **admin panel** with **CRUD capabilities**, enabling database modifications and reducing manual workload by **60%**.
- Refined system architecture to efficiently process **1000+ concurrent queries**, ensuring stability and scalability under heavy usage.

ACHIEVEMENTS

Smart India Hackathon 2024 (SIH'24) Grand Finalist

Ministry of Law and Justice

- Recognized nationally as one of the top 5 for innovative solutions and problem-solving excellence.

Won 5 hackathons, demonstrating collaboration, innovation, and problem-solving skills.

PROJECTS

Payzer - Payment Wallet System

GitHub

Next.js, Turborepo, TypeScript, Prisma, PostgreSQL, Zod, Tailwind CSS, NextAuth.js

- Engineered a full-stack digital wallet using Next.js/TypeScript with secure **P2P transfers**.
- Developed **bank-webhook microservice** and **transaction locking system** for preventing race condition and reliable payment processing. **Containerized services** and **automated CI/CD pipeline** for testing and deployment.

NyayaBodh - AI-driven research engine for commercial courts

GitHub

React.js, TailwindCSS, Redux Toolkit, FastAPI, PostgreSQL, Hugging Face Transformers, FAISS

- Architected a full-stack **legal tech** platform featuring real-time PDF processing, entity extraction, and intelligent summarization and recommendation of Supreme Court judgments, Processed 1,000+ legal documents with 90% accuracy in entity extraction, improving legal research efficiency.
- Implemented document generation for 7+ types of legal agreements (NDA, POA, etc.) with customizable templates and real-time PDF previews and server-side PDF generation.
- Built an intelligent legal chatbot using LLaMA-3.1 and semantic chunking that provides context-aware responses about case details and guides users through different processes, improving user engagement by 40%.

EDUCATION

Bachelor of Technology in Artificial Intelligence and Data Science

June 2022 – May 2026

Vishwakarma Institute of Information Technology

POSITIONS OF RESPONSIBILITY

Vishwapreneur'25 | Organizing Team

Mahatma Phule Sanskrutik Bhavan, Pune, IN

- Led technical operations for **Pune's largest entrepreneurial summit**, managing a team of 10 students.

Technical Operations Head

Artificial Intelligence and Students Association, VIIT College, Pune, IN

- Engineered event websites like Vizathon 2.0, streamlining participant onboarding with a dedicated registration platform. Also **mentored AI enthusiasts** in AI technologies and project development.

SKILLS AND CERTIFICATIONS

Programming Languages: Python, C++, JavaScript, TypeScript, SQL.

Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, MongoDB, FastAPI, Hono.js, Prisma ORM.

Developer Tools: Git, GitHub Actions, Docker, CI/CD, Postman, Tableau, Streamlit, Cloudinary, Multer, Recoil.

Technical Skills: API Development, Full-Stack Development (MERN Stack), CI/CD Pipelines, Quantization, Retrieval-Augmented Generation (RAG), Chatbot Integration, Cloud Deployment, LLM Fine-Tuning.

Soft Skills: Problem-Solving, Leadership, Team Collaboration, Effective Communication, Critical Thinking, Adaptability, Time Management, Public Speaking, Mentorship.

Certifications: Introduction to Networks by Cisco (CCNA), Supervised Machine Learning: Regression and Classification.

Spoken Languages: Hindi, English, Marathi.