

AAYUSH GAUTAM

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EDUCATION AND FELLOWSHIP

Kathmandu University,
B.Tech in Artificial Intelligence; GPA: 3.65,
Fusemachines AI Fellowship
Fusemachines Inc. • Specialized training in AI, ML, and NLP

Dhulikhel, Nepal
2021 - December 2025
Kathmandu
Jan 2023 - Dec 2023

SKILLS SUMMARY

- **Languages:** Python, SQL
- **Frameworks:** PyTorch, TensorFlow, Scikit-Learn, Pandas, NumPy, Matplotlib
- **AI and NLP tools:** LangChain, LangGraph, Hugging Face, Vector Databases, RAG,
- **Development & Deployment Tools:** FastAPI, Docker, Azure (CI/CD Pipelines), Railway, Veracel, Heroku
- **Soft Skills:** People Management, Excellent communication

WORK EXPERIENCE

Freelance AI Engineer | Self-employed

Nov 2024 – Mar 2025

- Built a liver tumor detection system (CNN + Grad-CAM) with 93% accuracy on medical CT scans.
- Developed RAG-based document assistants with OCR + embeddings for real-time enterprise Q&A.
- Deployed AI backends (FastAPI + Docker) with CI/CD to Azure, Vercel, Heroku, Railway, ensuring scalable, low-latency APIs.

ARTIFICIAL INTELLIGENCE INTERN | Tecnvirons | [LINK](#)

Mar 2025 – June 2025

- Assisted in building and deploying AI-powered voice agents with RAG search (Pinecone DB + Plivo).
- Contributed to a WhatsApp onboarding bot with sentiment analysis and smart callbacks.
- Gained hands-on experience with FastAPI, Supabase, Azure Container Apps, and CI/CD automation using GitHub Actions.

AI Engineer | Tecnvirons | [LINK](#)

May 2025 – Present

- Deployed an AI-powered voice & WhatsApp agent with **RAG / fuzzy** search for **appointment booking, lead generation, outbound calls, and conversational engagement**, boosting first-call resolution by 40% and conversions by 35%.
- Engineered a FastAPI–Supabase backend for logs, transcripts, analytics, and automated customer insights dashboards, reducing manual processing by 30% and uncovering buying motivations to guide product strategies.
- Implemented end-to-end CI/CD pipelines (GitHub Actions → Azure Container Registry → Azure Container Apps).

PROJECTS

Flash Notes | [LINK](#) | [Next.js](#), [FastAPI](#), [LangChain](#), [ChromaDB](#)

- Document assistant powered by **Qwen 2.5 + RAG**, enabling chat, summary, and quizzes from **PDF, PPTX, and TXT file**.
- Integrated **Tesseract OCR** for image-based text extraction.
- Allows users to interact with documents, generate summaries, and create quizzes to enhance comprehension.

UniVoice_RAG Assistant | [FastAPI](#), [LangChain](#), [ChromaDB](#), [Whisper](#), [TTS](#), [Unisloth](#)

- Fine-tuned **STT (Whisper, WER ~8%)**, **TTS (naturalness MOS ~3.5/5)**, and a **custom LLM via Unisloth (response accuracy ~90%)**, enabling fast, accurate speech-to-speech interactions.
- Integrated **RAG search** over the university knowledge base for real-time admission queries.
- Deployed backend with **FastAPI + ChromaDB** for scalable, low-latency interactions.

AWARDS AND CERTIFICATES

KEC Hackathon(Winner)

February 2024

- Developed a **mobile and web app** for the detection, reporting, and management of **fire and potholes**.

Khalisis “Bin There, Hacked That” (1st Runner-up)

June 2025

- Designed an **end-to-end waste management system** that reduced carbon emissions by ~25% through optimized workflows.

KUAIC Datathon’24 (Winner)

January 2024

- Analyzed Nepal Census data showing only ~26% female labor force participation and <20% land ownership by women, highlighting the impact of a patriarchal society.