

# Arnab Nath

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## SUMMARY

Software Engineer specializing in the development of backend services, AI Agents and Retrieval-Augmented Generation (RAG) systems. Proficient in applying AI and ML principles to create innovative and efficient software solutions. Comfortable working across databases and model-driven features including retrieval pipelines and intelligent automation

## EXPERIENCE

### Software Engineer

October 2024 – December 2025

LTIMindtree

Kolkata, India

- Architected GenAI-powered code translation engine that modernized **500+ legacy applications 3x faster** than manual approach, enabling client to sunset technical debt **18 months ahead of schedule**.
- Created GenAI-driven risk simulation engine that flagged project risks **6 weeks in advance**, and improving on-time delivery from **64% to 89%**.
- Built LLM-powered resume screening tool that processed **10K+ applications** with **85% time reduction**, increasing hiring manager acceptance to **92%** and enabling **2,400 HR hours** to be reallocated to strategic initiatives.
- Pioneered GenAI documentation system that auto-generated **80%** of technical specs from source code, reclaiming **400 hours/month** and achieving **90% reduction** in compliance violations.

## PROJECTS

### Flipkart Product Recommendation System | Python, Flask, LangChain, AstraDB December 2025 – December 2025

- Built a lightweight RAG-powered product recommendation system using TF-IDF and AstraDB vector search to deliver high-relevance item suggestions.
- Developed a Flask web app with a clean UI and containerized it via Docker for reproducible deployment.
- Added Prometheus and Grafana monitoring to track API latency, request volume, and recommendation performance.

### AI Study Abroad Counsellor | Python, Generative AI, Next.js, FastAPI, Groq, Supabase February 2026 – February 2026

- Built an AI counseling platform using Llama 3.3 and FastAPI to provide personalized university recommendations and automated roadmaps.
- Developed an AI CV Parser to extract academic data from PDF resumes and integrated Supabase for secure profile management.
- Created a dark-themed UI with Next.js 15 and Framer Motion, featuring glassmorphism and smooth animations.

### Travel Planner | Python, LangChain, Artificial Intelligence, Streamlit, Folium, GeoPy

June 2024 – June 2024

- Developed an End to End Travel Planner using Langchain framework and an open-source Mistral-7B Instruct model.
- Built the front-end using Streamlit and used Folium and GeoPy to create an interactive map and get coordinates of places.

## TECHNICAL SKILLS

**Languages:** Java, Python, HTML, CSS, JavaScript, SQL, Machine Learning

**Frameworks:** LlamaIndex, Material-UI, RapidAPI, FastAPI, LangChain

**Developer Tools and Platforms:** Git, Cursor, Windsurf, Docker, Kubernetes, Prometheus, Grafana, Pinecone, AstraDB

**Libraries:** Pandas, NumPy, Matplotlib, Scikit-Learn

## CERTIFICATES AND ACHIEVEMENTS

- Microsoft Certified Azure Fundamentals
- Hacktoberfest 2025
- GitHub Copilot

## EDUCATION

### Haldia Institute of Technology

Bachelor of Technology in Computer Science and Engineering (AI and ML)  
CGPA - 9.02

Haldia, West Bengal

Nov. 2020 – July 2024