

# AYUSH RUPAPARA

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## EDUCATION

Year	Degree/Examination	Institute	CGPA/ %
2021- 2025	BTech Mathematics & Data Science	Maulana Azad National Institute of Technology (NIT-Bhopal)	8.19
2020	HSC (class XII)	The Imperial Science School	81.57%
2018	SSC (class X)	The Imperial Science School	94.67%

## PROJECTS

### Agentic AI Trip Planner [ LangGraph, FastAPI, LLM, Streamlit ]



- Designed an agentic LangGraph workflow enabling prompt-driven travel planning via LLMs and external toolchains.
- Implemented a multi-agent architecture with real-time API integration to generate personalized itineraries, expense breakdowns, and destination insights.
- Built a modular system using FastAPI for backend APIs, and Streamlit as the interactive front-end interface and used uv for dependency management.

### Image Caption Generator [ PyTorch, ViT, GPT-2, Huggingface, Gradio ]



- Designed and implemented an image captioning model using ViT as the visual encoder and GPT 2 as the text decoder with cross-attention.
- Developed Gradio-based interactive interface with beam search-based inference & deployed on Hugging Face Spaces.
- Achieved BLEU-1 score of 0.56 on Flickr8k dataset using early stopping & optimized encoder-decoder architecture

### Reliable RAG-Based Q&A System [ RAG, Langchain, Vector Database, LLM ]



- Developed reliable RAG-based question-answering agent using LangGraph, LLaMA 3, and Chroma.
- Implemented various techniques for dynamic routing, fallback management, and hallucination detection.
- Integrated Tavily search API for Web search, FastEmbed for embedding, and stateful cyclic workflow and conditional edges to optimize decision-making in answer generation.

## ACCOMPLISHMENT

- Achieved **Rank 66** out of 75,000+ participants in the Amazon ML Challenge, where we developed an entity extractor from eCommerce images.
- GATE 2025 DA (data science and artificial intelligence) qualified and **Expert** at the Kaggle platform
- Secured **Rank 10** in SSC Gujarat Board Exam out of 11+ Lakh students & AIR **13907** in JEE mains Exam.
- Solved **250+** Data Structure and Algorithms Problems on Leetcode, Deep ML, and other Platforms.

## SKILLS

Programming Language	Python, SQL, C, C++, R, HTML, CSS
Frameworks/Tools	TensorFlow, Scikit-Learn, Tableau, Pytorch, Git, Keras, Langchain, FastAPI, LangGraph
Technical Proficiencies	Data Structure & Algorithm, DBMS, Machine Learning, Object Oriented Programming, Neural Network, Operating System, Data Analysis

## EXPERIENCE

### Amazon Summer School | Machine Learning Apprenticeship { July 2024 }

Remote

- Gained mentorship and guidance regarding machine learning-related concepts, deep neural networks, supervised & unsupervised learning, sequential learning, and LLMs through 16 interactive sessions.