



Ujjwal Prakash Bajpayee

Roll No.: 2023UG3017

B. Tech

CSE (with DS and AI)

Indian Institute Of Information Technology, Ranchi

+91-8578024768

ujjwal.2023ug3017@iiitranchi.ac.in

ujjwalprakash02@gmail.com

Github

Linkedin

SUMMARY

AI Engineer and Data Scientist with experience in building agentic LLM applications, automating workflows, and developing RAG pipelines. Skilled in PyTorch, LangChain, SQL, and data analysis, focusing on scalable, real-world AI systems.

EDUCATION

Indian Institute of Information Technology Ranchi

2027

B.Tech in Computer Science and Engineering (with specialization in DS and AI)

TECHNICAL SKILLS

Languages: Python, SQL, C, C++

Developer Tools: VS Code, Git, Power BI, Kaggle, Jupyter Notebook, APIs, Postman, Unix/Linux, BeautifulSoup

Frameworks/Libraries: NumPy, Pandas, Matplotlib, Scikit-learn, LangChain, PyTorch, FastAPI, Flask, Streamlit

Cloud/Databases: Vector Databases, PostgreSQL

Deep Learning: RNNs, LSTMs, GRUs, Attention Mechanism, Seq2Seq, Transformers

Soft Skills: Leadership, Communication, Problem Solving, Teamwork, Team Management

EXPERIENCE

MathonGO

Aug 2025 - Present

AI Engg. Intern

Bangalore, Remote

- Developing a dynamic format-conversion engine using **LangChain and PyTorch** to adapt questions to specific exam styles, enforcing 100% schema-validated outputs and improving content quality.
- Engineering an automated QA system for student doubts, will **reduce query resolution time by 85%** and ensuring instant, accurate responses at scale.

ConnectHEOR

Mar 2025 - Sep 2025

AI Engg. Intern

London, Remote

- Optimizing an automated **literature review system** using NLP pipelines and workflow automation, with a focus on reducing processing time from **15 days to just 7 days** and increasing research efficiency by over 70
- Fine-tuned **LLaMA** for Manim code generation, **automating the creation of mathematical animations** and decreasing manual coding effort by **70%** for complex educational content.
- Implemented a self-video generation system with AI avatars to **automate content creation**, enabling the production of personalized and scalable video training materials.

PERSONAL PROJECTS

PaperScope

Tools: Python, RAG, FAISS, Streamlit, PyMuPDF

- Built an LLM-powered app integrating arXiv API and Google Gemini to retrieve and summarize 1000+ new papers/day.
- Used RAG for Chat and indexed 10k+ abstracts with FAISS for sub-second semantic retrieval.

ThoughtChain

Tools: LangChain, ChatGrok, Streamlit, MySQL

- Designed a 4-agent system(Strategist, Researcher, Critic, Writer), enabling collaborative problem solving.
- Implemented a custom memory agent to cache intermediate outputs via local storage, cutting recomputation by 40%.

ACHIEVEMENTS/LEADERSHIP

- Demonstrated strong competitive programming skills by achieving a **3-star rating** on **CodeChef**, **Specialist** on **Codeforces** and placing in the **top 12% globally** on **LeetCode**.
- Led a team to a regional qualification for the **Smart India Hackathon** and successfully won the **GDG Solution Challenge 2024 regional**.
- Successfully solved over **500 problems** across platforms like LeetCode, GeeksforGeeks, and Codeforces, showcasing strong algorithmic and problem-solving skills.
- Mentored over **100 students** as an **AI/ML Lead** for **Google Developer Group** on Campus IIIT Ranchi.