Anindya Biswas

PG (I Year I Semester)
M.Tech In Artificial Intelligence
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Indian Institute of Technology Roorkee

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Area of Interest

AI & ML, NLP, LLMs, Retrieval Augmented Generation (RAG)

Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2024	Graduate (UG)	University of Calcutta	9.380
2019	Intermediate (Class XII)	Sudhir Memorial Institute	83.00 %
2017	Matriculate (Class X)	Sudhir Memorial Institute	9.200

Internships

IBM Skillsbuild Data Analytics Internship Program | IBM CSRBOX June 2023 - July 2023

- Used American Sign Language hand images dataset to train a Convolutional Neural Network (CNN) based on transfer learning of EfficientNet, achieving 95% accuracy which was served using Flask in Python.
- Data Augmentation methods such as random rotation, flip and crop used to increase variation in dataset.
- Awarded Winner of the IBM SkillsBuild Data Analytics Program.

Projects

Utilizing LLMs for Question Generation and Topic-Based Question Ranking | University of Calcutta
January 2024 - June 2024

- Implemented Retrieval Augmented Generation (RAG) with popular (Large Language Models) LLMs from Cohere and OpenAI for academic question generation using study materials as reference and previous year questions as few-shot examples along with topic based question analysis.
- Used LangChain framework and FAISS vector store along with a Streamlit frontend.
- Extended further for MCQ generation using gpt-4o-mini and an agent based system. Capable of making MCQs from text, documents, Wikipedia and YouTube video captions.

Skills

Computer languages	Python, C++, C, SQL, Javascript
Software Packages	Numpy, Pandas, Matplotlib, Keras, Tensorflow, Scipy, Flask, Langchain, Streamlit, FAISS
Languages Known	English, Bangla, Hindi

Research Publications

- Priyanka Mazumdar, Anindya Biswas, Anirban Naskar, Aritra Mandal , Soumya Sen, "Advancing Accessibility: ASL Visual Recognition Technology through EfficientNet", in Springer, ICSTA, 2023
- Priyanka Mazumdar, Anindya Biswas, Soumyajit Banerjee, Soumya Sen, "Utilizing LLMs for Topic-Based Question Retrieval and Ranking in Examination Systems: A Historical Question Set Analysis", in Springer, AISC, 2024