RAJARSHI ROY

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EDUCATION

B.Tech - CSE
Kalyani Government Engineering College,Kalyani
08/2021 - 07/2025(Expected)
8.9 cgpa (upto 4th sem)

PERSONAL PROJECTS

Game Recommender App (May 2024)

→ Developed a scalable **game recommendation system** powered by **Google Gemini**.
→ Key features include seamless scalability, **natural language query handling**, user-friendly chatbot interface using **Streamlit**, and user feedback integration for continuous improvement.
→ Implemented **logging** and **monitoring** with **Langsmith**.
→ Utilized **GitHub Actions** for **CI/CD**, **AWS ECR** for **Docker** container registry, **AWS EC2** for hosting, and **Terraform** for infrastructure as code

Langchain_QA (Mar-Apr 2024)

→The **Langchain_QA** app optimizes question answering by merging the **RAG** model with **Langchain**'s document division and **Gemini**'s vector embeddings. **FAISS** enhances query efficiency by swiftly storing and retrieving similar vectors. **Chainlit** for the user interface.
→ Leveraging **Gemini** as the **base LLM** empowers RAG, while **Langchain's prompt templates** ensure precise responses.
→ **GitHub Actions** automate **CI/CD**, **Docker** enables consistent containerization, and **AWS** provides scalable deployment infrastructure.

My Sweet Home (Jul-Nov 2023)

→It **predicts** house prices and **recommends** similar housing properties from the database using content-based filtering.
→**House Price Prediction:** When predicting the **accuracy** of housing properties for **sale,** it is approximately **90%**, whereas for **rental** properties, it is about **70%.**
→**Property Recommendation:** Along with the house price predictions users will also get a list of **6 most similar properties** that match the given criteria and also show the **average percentage of cosine-similarity** for those 6 recommended properties..

TECHNICAL STACK

Data Science / Machine Learning / Deep Learning
Python, Data Visualisation,Supervised learning algos, Unsupervised Learning algos, ANN, CNN, NLP, EDA, LLM, Feature engineering,Feature selection & extraction etc.

Mathematics for ML & DL
Algebra, Probability, Statistics, Calculus,Matrices.

Python packages and Frameworks
Scikit-Learn, Tensorflow, Keras, NumPy, Pandas.

Web Devolopment
Html,CSS,Flask,Django,Javascript,Chainlit, Streamlit.

Programming languages
Python,JavaScript, SQL,NoSQL, HTML, CSS.

Databases
Mysql,Mongodb,Postgresql, Pinecone, FAISS

MLops Tools
DVC,MLflow,ci/cd,github actions.

Cloud Deployment and containers
AWS ECR,AWS EC2,Vercel,Git,Docker.

Gen AI Framework and Models
LlamaIndex, Langchain, Google Gemini.

ACHIEVEMENTS

Winner of Smart India Hackathon 2022
Smart India Hackathon , Aug 2022

CERTIFICATIONS

Machine Learning Specializaton Course
Coursera , Mar 2023

Deep Learning Specialization Course
Coursera , Mar 2023

Google Data Analytics Specialization
Coursera , Jan 2022

Mathematics for Machine Learning
Coursera , Mar 2023