Rohit Mukati

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PROFESSIONAL SUMMARY

Driven by a passion for AI and Machine Learning, I am a computer science student proficient in Python, MySQL, and scripting. I am Experienced in Generative AI, Natural Language Processing (NLP), and LangChain frameworks, with hands-on expertise in data processing, feature engineering, and building machine learning models. I am eager to apply my AI skills to design scalable systems and implement machine learning pipelines for impactful results.

Education

Vikrant Institute of Technology and Management — **Indore, MP**
Bachelor of Technology, *Information Technology and Engineering* — *2021 - 2025*
Specialization in ***AIML***

Technical Skills

Languages and Tools	**:** Python, SQL(MySQL), Java, GitHub.
Mathematics for ML & DL	**:** Statistics, Probability, Matrices
Libraries & Frameworks	**:** Numpy, Pandas, Matplotlib, Seaborn, Nltk, Sk-Learn,TensorFlow, Keras, Flask.
Generative Ai	**:** LangChain, LlamaIndex, Rag, HuggingFace(transformer), Fine-tuning, Vector DB, LLM.
ML & Deep Learning	**:** Data Collection, Data Preprocessing, Data Visualization, Linear and Logistic regression, KNN, Decision Tree, Random forest, SVM and K Means , Neural Networks, Natural Language Processing, words embeddings.

Projects

Movies Recommendation System

- Developed an end-to-end content-based movie recommender system using a Kaggle dataset of 5000 movies.
- Conducted extensive data preprocessing and feature engineering, creating tags for each movie and transforming them into vectors and features using the **Bag of Words** techniques. Leveraged **cosine similarity.** to measure the likeness between movies and recommend the top 5 movies. Used libraries such as NumPy, Pandas, Scikit-Learn, NLTK, and Streamlit to streamline the recommender system's functionality and user interface.

Text Summarization NLP

- Developed an end-to-end text summarization system with a fully structured pipeline using the Hugging Face Samsum dataset
- Conducted experiments and implemented final versions for data ingestion, validation, and transformation processes.
- Performed Word Embeddings during model building, followed by fine-tuning Hugging Face transformers to to generate accurate, concise summaries.
- Built a prediction pipeline and a user-friendly app for seamless interaction and summary generation.

Medical ChatBot

- Built an AI-powered medical chatbot utilizing **LangChain** and a **RAG** (Retrieval-Augmented Generation) pipeline for accurate healthcare responses.
- Parsed medical documents of 700 pages using PyPDF Loader, converted them into chunks, and generated **vector embeddings** with Hugging Face models.
- Integrated Pinecone vector database to store, manage, and retrieve embeddings efficiently for real-time responses.
- Combined embedding retrieval with **OpenAI's** LLM, enabling context-aware and dynamic medical query resolutions.

Strengths

Problem-solving | Adaptability | Analytical | Curious | Fast Learner

Achievements & Certifications

- Earned a Badge of completion for the Open-Access Data Science Virtual Experience Program - BCG
- Data Science Virtual Experience Programme Certification - British Airways