Heerak Agrawal

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RESEARCH INTERESTS

LangChain, Llama index, Machine learning, Deep learning, Generative Artificial intelligence(GenAI).

EDUCATION

B.Tech, information technology	Expected May 2026
Institute of Engineering and Technology, DAVV, Indore	CGPA: 8.00
Schooling	
XII(CBSE) , Kendriya Vidyala No.1 , Indore	91.6% (2022)
X(CBSE) , Kendirya Vidyalaya No.1 , Indore	90.8% (2020)

PROJECTS

EduExpert query system | *individual project*   May 2024

- Powered by Google PaLM and LangChain, EduExpert's query system provides accurate, real-time responses to educational queries. By combining Google PaLM's advanced language model with LangChain's robust NLP framework, the system efficiently comprehends and answers complex questions.Built using streamlit app, provides option to create your own knowledgebase using FAISS library which utilizes vector embeddings.

LLM based legal document analysis webapp: | *Hackathon*   March 2024

- Team project: A large language model based web-application to automate legal document analysis. Uses Hugging face pipeline fine tuned on legal document dataset to summarize the key points, and overall strengths and weakness analysis of the document from the perspectives of sender and receiver, uses python modules to extract data from pdf,(image and textual).

AgriAID | *individual project*   December 2023

- A CNN based deep learning algorithm trained on multiple kaggle datasets, helps farmers in determining their crop's health. Takes the leaf images , identifies disease type, is public and can be trained on more datasets in order to increase performance and identify more types of diseases.

ML / AI based Sentiment analysis of social media textual content: | *Hackathon*   September 2023

- Team project: Python backed, uses an ensemble model(BERT, SVM, BiLSTM) trained on multiple languages . Uses API, selenium based python scriptsto perform scraping and automation to provide real time data acquisition and preprocesses the texts using NLP, assigns them sentiments(positive, negative, neutral) represents them through statistical graphs and pie charts.

SKILLS

Technology |

- AIML (Deep learning, Langchain and GenAI)
- Time series(Python language)
- Web scraping and API developement(selenium, tweepy, requests, beautifulsoup, scrapy, fastAPI)

Languages |

- Python, C, C++, JAVA

CERTIFICATIONS

Cyber Security	*Deen Dayal Upadhyay Kaushal Kendra (DDU-KK), DAVV, Indore*	April 2023
Reinforcement Learning based Trading	*IBM Developer Skills Network*	December 2023