T R Aromal

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EDUCATION

MSc Artificial Intelligence   2021 - 2023
Department of Computer Science, University of Kerala

BSc Computer Science   2018 - 2021
University Institute of Technology - Mulamkadakom, Kollam

EXPERIENCE

GAUDE Business and Infrastructure Solutions   Nov 2023 - Present
Junior Data Scientist

- Developed a framework for creating chatbots which can be seamlessly integrated to any websites with its own custom backend and with personalized knowledge bases, and use rag to answer the users query.The chatbot interface is fully customizable according to the clients requirement. Implemented session-based chat history viewing and storage to see individual user interaction with the chatbot.. the admin can see the total individual chats and the total number of messages

PROJECTS

LLM Finetuning

- Finetuned llama-3.2-3b and mistal-7b using unsloth in malayalam language using the Alpaca malayalam instruct dataset and is available on huggingface

Multilingual LLAMA using Bhashini

- Implemented a translation based multilingual Llama-2 7b local LLM model supporting 13 Indian languages by utilizing the Bhashini machine translation API by Ai4Bharath for input and output text translation based on the user language

Fine-tuned BERT for Text Classification

- Fine-tuned a BERT model for text classification using TensorFlow. Optimized model performance for specific classification tasks in this case the model was fine tuned on spam text or email classification dataset inorder to classify the text based on thge authenticity

Document QA Chatbot

- Created a question-answering bot using Langchain and OpenAI which enabled the chatbot to answer queries based on provided documents untilizing the RAG concept and vectordb
- A multi-agent framework which allow the user to create an agent for a specific task and give roles based on that which comprises of a web scraping agent capable of summarizing website contents. and a chat chatbot arena where 2 agents debates each other on a particular given topic
- Created an open-source chat interface for Ollama, Usually ollama is accessed through the terminal this new interface facilitating user interaction with various models which is robust all you need is ollama installed and download the required models and you can select the model from the dashboard and chat with it fully in your local hardware
- Designed a multi-agent RAG-based chatbot for document interaction using LlamaIndex Agents which make use of collections in the chromadb for more accurate information retrieval

SKILLS

Languages:	Python, R, SQL, HTML, CSS, JavaScript
Frameworks & Libraries:	Django, RASA, Langchain, Hugging Face, LlamaIndex, TensorFlow
AI/ML:	Deep Learning, Machine Learning, Natural Language Processing (NLP)
Tools:	Git, GitHub, Power BI, MySQL, Vector DB
Concepts:	LLMs, Agents, CrewAI, Fine-tuning

CERTIFICATIONS

- NLP and its applications by ICFOSS
- Pre-training of llm by deeplearning.ai
- Multi-agent system using CrewAI by deeplearning.ai
- Fine Tuning Large Language Models by deeplearning.ai
- Python for Data Science, AI & Development (IBM) - Coursera
- Foundations: Data, Data, Everywhere (Google) - Coursera