Uni Buddy

Team

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Offering Overview

- Uni Buddy is an AI personal assistant services tailored specifically for students in the US which encompasses a comprehensive approach to academic support, including study skills, time management, and emotional assistance.
- It aims to bridge the gap between students and academic success by providing holistic guidance and personalized assistance to navigate through their educational journey effectively.
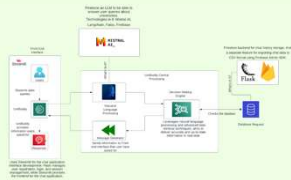
Why Uni Buddy?

- According to a recent survey, there are 5,300 universities and colleges in US.
- Students often find themselves lost in a maze of options, unsure of where to turn.
- UniBuddy provides personalized guidance tailored to your unique academic journey, ensuring success while navigating the maze of university options with confidence.
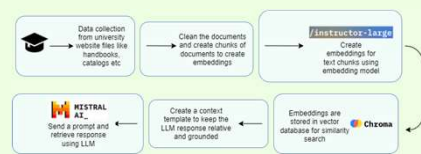
Methodology

- Uni Buddy uses LLM in the back-end to tailor responses to user queries based on their preferences.
- College handbooks, course catalogs etc act as the source of information of each college we like to onboard into UMKC..
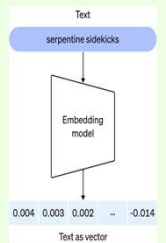
Concept Diagram

Model Diagram

Data Cleaning & Preparation

- Relevant pdf files are downloaded and index files, synopsis etc are removed to prevent irrelevant information feeding into embedding model.
- Convert documents into chunks to make sure text content can fit into LLM prompt for LLM fine-tuning.
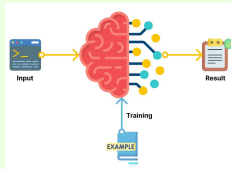
Embeddings

- Create embeddings from text chunks using appropriate embeddings models.
- "instructor-large" is used here based on its rating on embeddings of large files.
- Created embeddings are stored in a vector database for similarity search. Chroma DB is used for storing created embeddings..

LLM implementation

- Design retrieval prompt template to extract relevant responses from the LLM.
- Once the user sends a query, the variables are fit in the prompt template and sent for inference.

Triangle Architecture

Results

Results

Discussions

- We were able to integrate voice and text inputs for users to be able to communicate with the assistant.
- Leveraged up-to date information from official college websites to make sure integrity of the information.
- LLM Fine-tuning resulted in reasonable query responses from the assistant to users queries about the university and its policies.

Revenue Generation

- Uni Buddy can be developed further into a SaaS product where users can subscribe to aid their academic standing along with career planning, personality development etc.
- It can be useful for universities and schools to attract more potential students to join them and provide them with the best stream to find updated information.

Future Work

- Converting Uni Buddy into an user oriented SaaS product that can tailor responses based on the user preferences.
- Reduce response time of LLMs by using better processors.

References

- https://thomascherickal.medium.com/how-to-create-your-own-llm-model-2598615a039a
- https://towardsdatascience.com/how-to-build-an-llm-from-scratch-8c477768f1f9