

Skin Care Assistant : Chatbot using Large Language Model (Llama2)

Introduction:

The Skin Care Assistant is an intelligent system designed to provide expert skincare guidance and information using large language models (LLMs), natural language processing (NLP), embeddings, and langchain technology.

Components:

1.Vector Database Creation:

- Extract skincare-related data from designated files using TextLoader.
- Divide documents into 500-character segments with a 50-character overlap using RecursiveCharacterTextSplitter.
- Generate embeddings for each segment using the 'sentence-transformers/all-MiniLM-L6-v2' model.
- Store embeddings in a vector database for efficient retrieval using FAISS.

2.Language Model Loading:

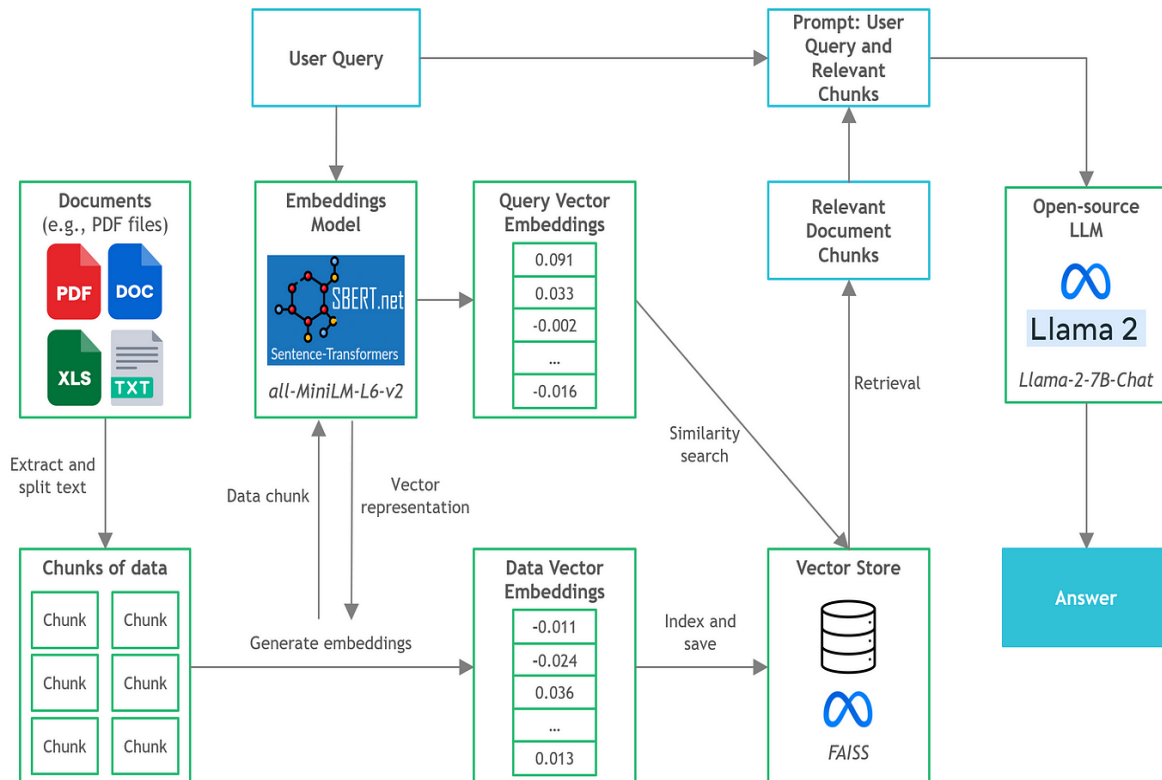
- To enable the Skin Care Assistant to generate responses, a large language model is loaded using HuggingFaceHub. The system has the flexibility to employ various models tailored for different use cases. For skincare-related tasks. Additionally, it can harness the power of the 'Llama-2-Chat' model, which is a collection of pretrained and fine-tuned generative text models, optimised specifically for dialogue use cases. These Llama-2-Chat models consistently outperform open-source chat models on various benchmarks and have shown high helpfulness and safety in human evaluations, comparable to popular closed-source models like ChatGPT and PaLM. The loaded model is seamlessly integrated into the other components of the project, ensuring versatile and high-quality responses to user queries.

3.Retrieval Question-Answering Chain:

- Utilise the RetrievalQA class from the langchain library.
- Configure the chain to use the loaded language model and vector database (FAISS) for answering questions.
- Ensure transparency by referencing source documents in responses.

Main Function:

- Initializes embeddings and the vector database.
- Configures the question-answering chain.
- Serves as the primary interface for responding to skincare-related queries.



Conclusion:

The Skin Care Assistant is an advanced AI system that offers expert skincare guidance and information by leveraging large language models, efficient information retrieval, and seamless integration with langchain technology. Ongoing model refinement ensures reliable skincare advice for various user scenarios.

This revised document provides a more concise and organised overview of your Skin Care Assistant project while retaining the essential information.