

GitHub Repository

The complete codebase and documentation for this project can be found in the following GitHub repository : <https://github.com/AddankiKavya630/Chatbot>

Technologies Used:

Python : The programming language used for writing the script

Streamlit : A framework used for creating interactive web applications in Python.

Generativeai : A library used to interact with Google's generative AI models, specifically the Gemini-Pro model.

Langchain : Langchain is used to convert the text into chunks, embeddings.

Pinecone : To perform Vector Similarity search

Approach

Setting up the environment :

First need to set up our development environment with the necessary libraries and tools API keys and Database ID.

And the requirements.txt file contains

- Streamlit
- streamlit_chat
- langchain
- sentence_transformers
- openai
- pinecone-client

Document Indexing

It involves loading the documents from a directory, Splitting documents, Creating embeddings and Storing embeddings in Pinecone

Building the Chatbot Application with Streamlit

The main part of our task is to build the chatbot application itself. We use Streamlit to create a seamless interactive interface for the chatbot.

- Session State Initialisation
- ConversationBufferWindowMemory
- PromptTemplate Construction

Creating the User Interface :

- ChatOpenAI Initialisation
- ConversationChain Setup
- Generating Responses

Refining Queries with OpenAI :

It is used to take the user's query and refine it to ensure it's optimal for providing a relevant answer. It can be implemented by Finding Matches in Pinecone Index and Tracking the Conversation.

Output

