**Mini POC: Basic Chatbot using LangChain + OpenAI**

**Objective**

Building a basic working chatbot interface using **LangChain** with either **OpenAI** or **LLaMA2**.

**Tech Stack**

* **LangChain**: Provides the message formatting (SystemMessage, HumanMessage, etc.) and wraps language models for easier integration.
* **OpenAI GPT model**: gpt-3.5-turbo
* **Streamlit**: For creating the chatbot UI.

**Why OpenAI?**

We chose **OpenAI** (via ChatOpenAI from langchain\_openai) over LLaMA2 due to:

* Easier setup (no infrastructure required)
* Reliable performance for chat-based tasks
* Prebuilt LangChain support

**Chat Flow**

1. User enters a prompt.
2. The prompt is wrapped in a HumanMessage and sent to the chat history.
3. LangChain sends the full chat history (including SystemMessage) to the OpenAI model.
4. Response is added to chat history and displayed to the user.