INTERACTIVE CHATBOT

Skills Takeaway:

* **Streamlit**.
* **Hugging Face**'s **InferenceClient**.
* **Natural Language Processing (NLP)** and **Text Generation** models.

Domain:

* **Natural Language Processing (NLP)**
* **Conversational AI**
* **Web Application Development**
* **Machine Learning**
* **AI-based Chatbots**

Problem Statement:

Develop a simple, interactive chatbot using **Hugging Face's** text generation API, which can respond to user inputs, maintain conversation history, and allow users to clear the chat history for new conversations. The bot should deliver dynamic, engaging responses and simulate a natural conversation flow.

Approach:

1. **Frontend Interface**:
   * Used **Streamlit** to create a user interface that allows text input and displays the chatbot's responses in real-time.
2. **Integration with Hugging Face**:
   * Utilized **Hugging Face's InferenceClient** API to generate text-based responses to user queries.
   * Applied parameters such as temperature=0.8 and do\_sample=True to generate more varied and natural responses.
3. **Session Management**:
   * Stored the conversation history using **Streamlit's session state** to ensure continuity in the conversation.
4. **History Management**:
   * Added a "Clear History" button to allow users to reset the conversation and start fresh.

Results:

* A fully functional, user-friendly interactive chatbot application.
* Real-time text generation with Hugging Face's powerful NLP models.
* A seamless chat experience with continuous conversation history and the ability to reset.
* The chatbot adapts to different user inputs and delivers relevant, context-aware responses.

Technical Tags:

* **#Streamlit**
* **#HuggingFace**
* **#NaturalLanguageProcessing**
* **#TextGeneration**
* **#ConversationalAI**
* **#WebAppDevelopment**
* **#MachineLearning**
* **#APIIntegration**
* **#InteractiveApplications**
* **#UserInterfaceDesign**