**Harshitha Behera:** **Enhanced Chatbot with DialoGPT**

**Summary of Enhanced Chatbot with DialoGPT**

**Overview**

The provided Python code implements an interactive chatbot using the DialoGPT-medium model from Microsoft's Transformers library. This chatbot uses the Streamlit framework for building an intuitive web interface and PyTorch for handling machine learning model computations.

**How the Code Works**

1. **Library Imports:**
   * streamlit: Used to create a simple and interactive web application.
   * transformers: Provides access to pre-trained language models.
   * torch: Handles tensor operations and model execution.
2. **Model Initialization:**
   * Loads the DialoGPT-medium model and its tokenizer from Hugging Face’s model hub.
3. **Web Interface with Streamlit:**
   * A title and description are displayed on the web app.
   * Light blue background and dark purple header styling are applied for better UI aesthetics.
4. **Chat Functionality:**
   * Uses Streamlit's session state to maintain chat history.
   * Captures user input through a text box.
   * Encodes the user's message, generates a response using DialoGPT, and decodes it.
   * Displays both user and bot messages sequentially on the app.
5. **Error Handling:**
   * Catches and notifies the user if required libraries are missing.

**Real-World Use Cases**

1. **Customer Support Chatbots:**
   * Businesses can use similar bots to handle frequently asked questions, helping to reduce customer service costs.
2. **Virtual Assistants:**
   * Can be embedded in personal apps or devices to assist users with reminders, scheduling, or providing information.
3. **Educational Platforms:**
   * An AI tutor that helps students with queries, explains concepts, or assists with practice questions.
4. **Entertainment:**
   * Used in gaming for creating interactive NPC dialogues or as a conversational companion.
5. **Healthcare Support:**
   * Helps patients schedule appointments, answer common questions, and provide health-related information (non-diagnostic).

**Usage Example**

Imagine integrating this chatbot on an e-commerce website:

* **User:** "What are your store hours?"
* **Bot:** "Our store is open from 9 AM to 9 PM every day."

Or in an educational platform:

* **User:** "Can you explain Newton's first law?"
* **Bot:** "Newton's first law states that an object will remain at rest or move in a straight line unless acted upon by an external force."

This demonstrates how AI chatbots enhance user engagement, streamline customer service, and provide valuable assistance across various domains.

Code File:  
<https://github.com/harshitha-behera/Transformers/tree/0566c54c05c0eead05eda63b7634b9acf5db795a/chatbot_DialoGPT>

Output:



