**CHATBOT USING PYTHON**

**Continue building the chatbot by integrating it into a web app using Flask.**

**1.Virtual Environment :**

**# Create a virtual environment (Python 3.7+)**

**python -m venv chatbot-env**

**# Activate the virtual environment**

**chatbot-env\Scripts\activate # On Windows**

**2.Install Required Libraries:**

**pip install transformers**

**pip install flask**

**pip install openai**

**Create Your GPT-3 API Key:**

**To integrate GPT-3, you need to create an API key from the OpenAI platform. You can follow OpenAI's documentation on how to create an API key: https://platform.openai.com/signup**

**3.Set Up Your Flask Web Application:**

**from flask import Flask, render\_template, request**

**import openai**

**app = Flask(\_name\_)**

**# Configure your OpenAI API key**

**api\_key = 'YOUR\_OPENAI\_API\_KEY'**

**openai.api\_key = api\_key**

**@app.route('/')**

**def home():**

**return render\_template('index.html')**

**@app.route('/get\_response', methods=['POST'])**

**def get\_response():**

**user\_input = request.form['user\_input']**

**response = generate\_response(user\_input)**

**return response**

**def generate\_response(user\_input):**

**# Use GPT-3 to generate a response**

**response = openai.Completion.create(**

**engine="text-davinci-002",**

**prompt=f"User: {user\_input}\nChatGPT: ",**

**max\_tokens=50**

**)**

**return response.choices[0].text**

**if \_name\_ == '\_main\_':**

**app.run(debug=True)**

**4. \*Maintain a Conversation History:\***

**To make the chatbot's responses contextually relevant, you should maintain a conversation history. Modify the Flask app code to store and update the conversation history:**

**python**

**conversation\_history = []**

**@app.route('/ask', methods=['POST'])**

**def ask():**

**user\_input = request.form['user\_input']**

**conversation\_history.append(f'You: {user\_input}')**

**# Process user\_input and get a response from GPT-3**

**response = get\_gpt3\_response(user\_input)**

**conversation\_history.append(f'Chatbot: {response}')**

**return response**

**@app.route('/get\_history')**

**def get\_history():**

**return "<br>".join(conversation\_history)**

**You can then create an endpoint, for example, /get\_history, that displays the conversation history.**

**5. \*User-Friendly Display:\***

**Improve the user interface to display the conversation history and responses more elegantly. You can update your chat.html file:**

**html**

**<div id="chat-container">**

**<div id="chat-history">**

**<!-- Conversation history will be displayed here -->**

**</div>**

**<div id="chat-response">**

**<!-- Responses will be displayed here -->**

**</div>**

**</div>**

**A chatbot and a person

Description automatically generated**

**You may need to use CSS styles to format the chat history and responses nicely.**

**6.Create HTML Templates:**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title>Chatbot</title>**

**</head>**

**<body>**

**<h1>Chatbot</h1>**

**<div id="chat-container">**

**<div id="chat"></div>**

**<input type="text" id="user-input" placeholder="Your message..." onkeydown="handleKeyPress(event)">**

**<button onclick="sendMessage()">Send</button>**

**</div>**

**<script>**

**function sendMessage() {**

**var user\_input = document.getElementById("user-input").value;**

**var chat = document.getElementById("chat");**

**if (user\_input.trim() == "") return;**

**chat.innerHTML += <div class="user-message">${user\_input}</div>;**

**document.getElementById("user-input").value = "";**

**fetch("/get\_response", {**

**method: "POST",**

**body: new URLSearchParams({user\_input}),**

**headers: {**

**"Content-Type": "application/x-www-form-urlencoded"**

**}**

**})**

**.then(response => response.text())**

**.then(data => {**

**chat.innerHTML += <div class="bot-message">${data}</div>;**

**});**

**}**

**function handleKeyPress(event) {**

**if (event.key === "Enter") {**

**sendMessage();**

**}**

**}**

**</script>**

**</body>**

**</html>**

**7. Javascript:**

**document.addEventListener("DOMContentLoaded", function() {**

**const chatHistory = document.getElementById("chat-history");**

**const chatResponse = document.getElementById("chat-response");**

**document.querySelector("form").onsubmit = async function(e) {**

**e.preventDefault();**

**const user\_input = document.querySelector("input[name='user\_input']").value;**

**chatHistory.innerHTML += `<div class="user-message">You: ${user\_input}</div>`;**

**const response = await getChatbotResponse(user\_input);**

**chatResponse.innerHTML += `<div class="bot-message">Chatbot: ${response}</div>`;**

**};**

**async function getChatbotResponse(user\_input) {**

**const response = await fetch("/ask", {**

**method: "POST",**

**body: new URLSearchParams({ user\_input }),**

**headers: {**

**"Content-Type": "application/x-www-form-urlencoded",**

**},**

**});**

**return await response.text();**

**}**

**async function loadConversationHistory() {**

**const historyResponse = await fetch("/get\_history");**

**chatHistory.innerHTML = await historyResponse.text();**

**}**

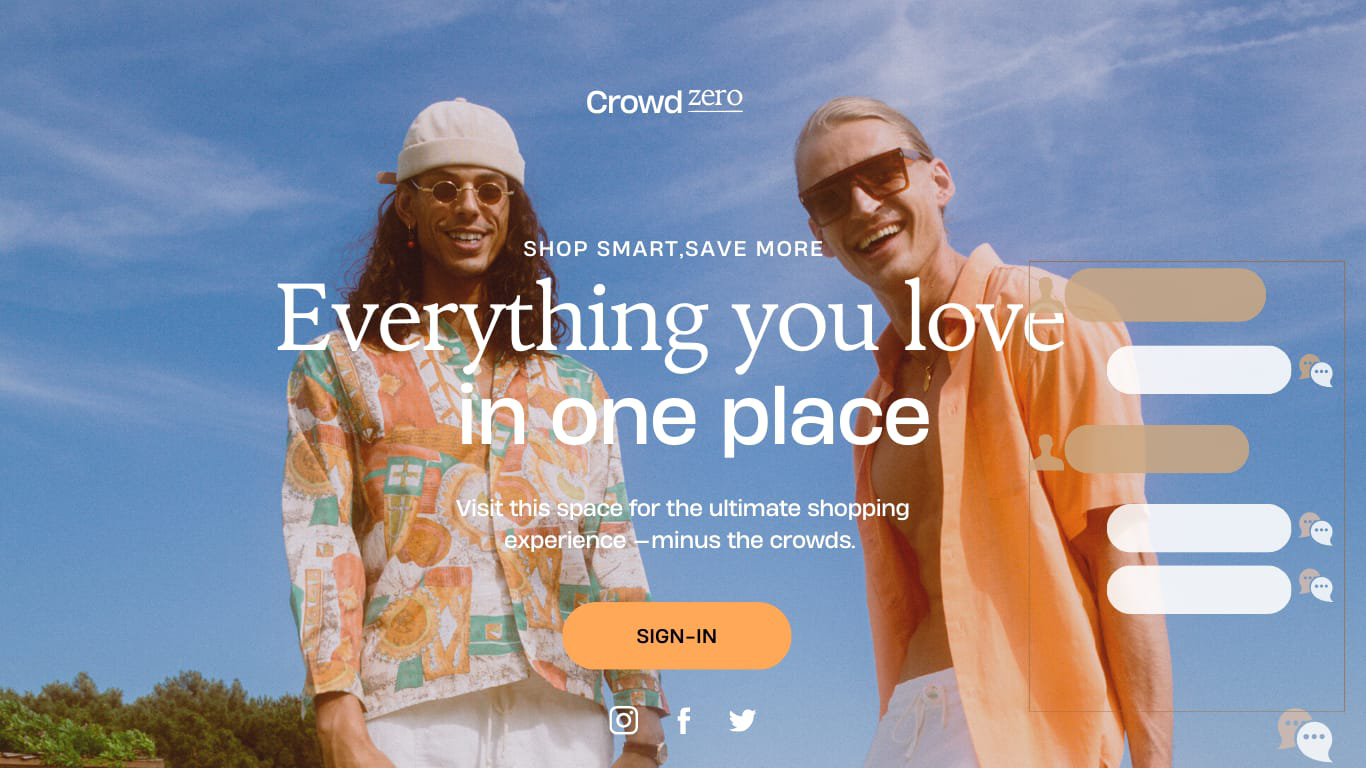
**loadConversationHistory();**

**});**

**8.Running Flask Application:**

**python app.py**

**Your chatbot web application should be accessible at http://localhost:5000/.**

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