

Project 8: Travel Agent Chatbot

Description:

This chatbot acts as a personalized travel agent. It can help users discover destinations, plan itineraries, suggest activities, and offer travel tips based on budget, season, or preferences. A great demo for travel, hospitality, or leisure-based LLM use cases.

travel_agent_bot.py

```
import openai
import os
import gradio as gr

# Set your OpenAI API Key
openai.api_key = os.getenv("OPENAI_API_KEY")

# Function to simulate a travel agent interaction
def travel_planner(user_input):
    # Set up the system prompt that defines the bot's role and behavior
    messages = [
        {
            "role": "system",
            "content": (
                "You are a knowledgeable and friendly virtual travel agent. "
                "Help users plan trips by suggesting destinations, itineraries "
                "Ask relevant follow-up questions if necessary to personalize
            )
        },
        {
            "role": "user",
            "content": user_input # The travel-related query from the user
        }
    ]

    try:
        # Make API call to OpenAI's GPT model with the prompt and user input
        response = openai.ChatCompletion.create(
            model="gpt-3.5-turbo", # Choose the LLM to use
```

```

        messages=messages
    )

    # Return the assistant's travel suggestions or response
    return response['choices'][0]['message']['content'].strip()

except Exception as e:
    # Handle any error (like missing API key or connection issue)
    return f"Error: {str(e)}"

# Create Gradio interface for user interaction
iface = gr.Interface(
    fn=travel_planner,                # Function that generates travel a
    inputs="text",                   # Text input field for user questi
    outputs="text",                  # Bot's response will appear here
    title="🌐 Travel Agent Chatbot", # App title shown in the browser
    description=(
        "Plan your next trip with a virtual travel assistant. "
        "Try things like: 'Plan a 5-day trip to Japan on a budget', "
        "'Suggest summer destinations in Europe', or 'Things to do in Bali in
    )
)

# Launch the chatbot web app using Gradio
iface.launch()
```