# Chatbot for Travel Planning

Welcome to the world of personalized travel planning! This chatbot utilizes cutting-edge Large Language Models (LLMs) to help you craft unforgettable trips.

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## The Problem

Travel planning often involves navigating a sea of information, from destination research to itinerary creation.

#### **Destination Selection**

Choosing the perfect destination can be overwhelming, considering factors like interests, budget, and time constraints.

#### **Activity Planning**

Deciding on activities, tours, and experiences to fill your itinerary requires extensive research and planning.

#### **Accommodation Booking**

Finding suitable accommodation options within your budget and preferences can be time-consuming and challenging.

#### **Travel Tips & Information**

Accessing reliable travel tips, visa requirements, local customs, and other essential information can be difficult.

## Our Solution

Our chatbot leverages AI to help you overcome these challenges, providing personalized recommendations and streamlining the planning process.

 $\left( \mathbf{1}\right)$ 

#### Personalized Recommendations

The chatbot understands your preferences and offers tailored suggestions for destinations, activities, and accommodations.

(3)

#### Travel Tips

The chatbot provides useful travel tips, including visa requirements, local customs, and safety information.

(2)

#### **Detailed Itineraries**

It helps you create detailed itineraries, including suggested activities, transportation, and dining options.

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#### **Engaging Conversation**

The chatbot interacts with you in a conversational tone, making the planning process enjoyable and interactive.

## Technology Stack

The chatbot is built using a powerful combination of front-end and back-end technologies.

| Frontend                                                  | Backend                                                |
|-----------------------------------------------------------|--------------------------------------------------------|
| Streamlit provides a user-friendly framework for creating | Ollama, an LLM running locally, handles the natural    |
| intuitive web applications.                               | language processing and provides insightful responses. |

#### 1. Environment Setup

- Install necessary dependencies, including Streamlit and Request liberaries.
- Configure the Ollama LLM model on your local machine.
  - Install Ollama from: <a href="https://github.com/ollama/ollama?tab=readme-ov-file">https://github.com/ollama/ollama?tab=readme-ov-file</a>
  - Start your local instance of the LLM service: ollama serve --model llama3

to create a robust development environment.

#### 2. User Interface Design

Build an intuitive and engaging user interface using Streamlit components like text input, buttons, and markdown.

## Travel Planning and Recommendations Chatbot

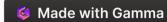
Welcome to the Travel Planning and Recommendations Chatbot! I'm TravelBot, your friendly and knowledgeable travel assistant. Ask me anything about travel planning, and I'll provide you with personalized recommendations and tips.

You:

Send

TravelBot: Hello! I'm TravelBot. How can I assist you with your travel plans today?

Clear Chat



#### 3. LLM Integration

Connect the chatbot with the Ollama LLM model using its API to enable natural language processing.

#### 4. User Query Handling

Implement functions to process user inputs and generate responses using the LLM, providing personalized recommendations.

```
# Function to get response from local LLM
def local llm response(messages):
    url = "http://localhost:11434/api/chat"
     headers = {"Content-Type": "application/json"}
     payload = {
         "model": "gemma:2b".
         "messages": messages,
         "stream": False
    response = requests.post(url, headers=headers, data=json.dumps(payload))
     if response.status code == 200:
         return response.json().get("message", {}).get("content")
     else:
         return f"Error: {response.status code}"
```

#### 5. Testing and Evaluation

Thoroughly test the chatbot with various queries to validate its accuracy and usability, gather user feedback, and refine its performance.

## Prompt Design

The chatbot's personality and communication style are crucial for creating a positive user experience.





#### Persona

The chatbot adopts a friendly and knowledgeable travel assistant persona named TravelBot.

#### Communication

TravelBot maintains a conversational and engaging tone, providing helpful quidance and recommendations.

## **Prompt Example**

The prompts are carefully designed to ensure TravelBot provides accurate and relevant information.

You are a helpful and knowledgeable travel assistant named TravelBot. Your goal is to help users plan their trips by providing personalized recommendations for destinations, itineraries, activities, accommodations, and travel tips based on their preferences and queries. Maintain a friendly and engaging tone throughout the conversation.

### Result

The chatbot delivers personalized travel recommendations, detailed itineraries, and helpful travel tips.



**User Query** 

Could you give me a good destination for a 5-day trip?

You:

Hi, Could you give me a good destination for a 5-day trip?

Send

TravelBot: Hello! I'm TravelBot. How can I assist you with your travel plans today?

You: Can you give me a good destination for a 5-day trip?

TravelBot: TravelBot: Hello! I'd be delighted to assist you with your travel plans.

Destination suggestions for a 5-day trip:

- Los Cabos, Mexico: A vibrant city with stunning beaches, world-class resorts, and a wide range of
  activities.
- Nice, France: A charming coastal city with a rich history, beautiful architecture, and a variety of
  restaurants.
- Dubai, United Arab Emirates: A futuristic city with towering skyscrapers, bustling markets, and a wide selection of attractions.
- New York City, USA: The bustling heart of the world, offering endless possibilities for sightseeing, dining, and entertainment.
- Sydney, Australia: A vibrant city with stunning scenery, diverse culture, and a variety of activities.
- Maui, Hawaii: A paradise for nature lovers, with pristine beaches, lush rainforests, and diverse
  wildlife.

What would you like to prioritize in your trip? (e.g., relaxation, adventure, culture, family-friendly)

Additional resources to help you plan your trip:

- TripAdvisor: A comprehensive travel guide with reviews, recommendations, and a wide range of destination options.
- . Lonely Planet: A well-known travel guide that offers insider tips and cultural insights.
- Expedia: A leading travel booking website with a wide selection of destinations and accommodations.

Please let me know your preferences, and I'll recommend a destination tha needs.

