**AI Powered – Travel Planner**

Documentation

**Overview**

The **AI-Powered Travel Planner** is a Streamlit-based web application that helps users generate structured travel itineraries based on their preferences. It leverages **Google's Gemini AI (via google.generativeai)** to generate personalized trip plans.

## Features

* **Destination-based Travel Planning**
* **Customizable User Preferences** (Budget, Activities, Diet, Accommodation, Walking Tolerance)
* **Custom Prompt Option** (For more specific requests)
* **Dynamic Loading Animations**
* **AI-Generated Itinerary Display**

## Application Structure

### **User Input Handling**

* + Users can **enter their destination, number of days, budget, and other preferences**.
  + A **toggle button** allows switching between a **custom prompt** and structured input fields.

### **Generating AI Itinerary**

* + The app dynamically constructs a **structured prompt** for Gemini AI based on user inputs.
  + If the user enters a **custom prompt**, it overrides the structured inputs.

### **Loading Animation**

* + The app displays **rotating messages** to simulate processing time before fetching AI-generated results.

### **Displaying Results**

* + The **structured itinerary** is presented with headings and clear formatting.

**How to Use:**

1. **Enter Your Destination:**
   * Start by typing in the city or country you'd like to visit.
2. **Number of Days:**
   * Use the slider to select how many days you'll be traveling.
3. **Select Budget Level:**
   * Choose from "Low," "Medium," or "High" to indicate your budget.
4. **Additional Specifications (Optional):**
   * Click "🛠️ Additional Specifications" to fine-tune your trip:
     + **Preferred Activities:** Select from options like "Cultural," "Adventure," "Relaxation," "Food Tour," or "Nightlife."
     + **Walking Tolerance:** Choose how much walking you're comfortable with: "High," "Moderate," or "Low."
     + **Dietary Preferences:** Specify any dietary needs, such as "Veg-Food" or "Non-Veg."
     + **Accommodation Type:** Pick your preferred lodging, like "Budget," "Mid-range," "Luxury," "Near City Center," or "Quiet Location."
5. **Write Your Own Prompt (Optional):**
   * If you have a very specific plan in mind, click "✍️ Write your own instead? Click here!"
   * A text area will appear where you can type in your own custom prompt for the AI.
   * To return to the standard input fields, click "🏞️ Prefer choosing? Click here!"
6. **Build Your Travel Plan:**
   * Once you've entered all your details, click "✈️ Build My Travel Plan."
   * The app will display a loading animation while the AI creates your itinerary.
   * After a moment, your personalized travel plan will appear!

**Tips for Best Results:**

* Be as specific as possible when entering your preferences.
* If using a custom prompt, provide clear and detailed instructions.
* If you are not happy with the first generated response, you can always change the input fields and re-generate the response.

## Future Enhancements

* **Map Integration** for route visualization.
* **Speech to text search for free hand use**
* **Image generation of the destination**
* **Flight & Hotel API** integration for real-time booking.
* **Download Itinerary as PDF** feature.

**Happy Travel!!!**