AI-Powered Trip Planner

Technologies Used: Python, CrewAI, OpenAI GPT, LangChain, python-dotenv, Visual Studio Code, Git, GitHub

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Project Overview:

Developed an AI-based trip planning assistant that generates personalized 5-day travel itineraries using autonomous agents built with CrewAI and OpenAI's GPT models. The project simulates the behavior of a human travel expert and was designed for modular expansion and collaboration among specialized agents such as hotel, budget, and food advisors.

Key Features:

- Implemented a **Trip Planner agent** using CrewAI that understands goals and backstory to generate intelligent travel plans.
- Designed the system to take a specific task (e.g., "Plan a 5-day trip to Tokyo focusing on culture and food") and return a well-structured itinerary.
- Used `python-dotenv` to securely load OpenAI API keys from a `.env` file.
- Built with **Visual Studio Code on Windows**, using virtual environments for isolation and `requirements.txt` for dependency management.
- Pushed the complete project to **GitHub** using Git.

Code Structure (main.py):

1. **Import Libraries**
    - `crewai`, `Agent`, `Crew` for AI agent framework.
    - `dotenv` and `os` to manage and load environment variables.
2. **Define Agent**
    - Role: Trip Planner
    - Goal: Build personalized travel plans
    - Backstory: Specializes in cultural and culinary travel planning
3. **Create Crew**
    - Crew includes the planner agent.
    - A task is assigned with a specific trip goal (e.g., Tokyo itinerary).
4. **Run the Application**
    - The script runs via command line using `python main.py`.
    - Output is printed in the terminal with a full trip itinerary.