Trip Recommender App: Understanding the Datasets and Their Relationships

Why These Datasets Were Created

When planning a travel recommendation system, it's important to understand both the places people can go and the people themselves. The goal of this project is to give smart, useful travel suggestions based on a traveler's interests, budget, and what similar travelers have done in the past. To support this, we created a small group of datasets that connect places, people, weather, and past trips.

Each dataset serves a specific purpose and links to others to form a complete picture. Together, they help us answer questions like:

- What destinations match someone's travel style and budget?
- When is the best time to visit a place?
- What have similar travelers enjoyed in the past?

1. Destinations Dataset (destinations.csv)

Why it exists: This file lists all the destinations we can recommend. It includes the type of experience each place offers, its cost, and safety level.

What's inside:

- destination: Name of the destination (example: Rome)
- country: Country where it's located (example: Italy)
- tags: List of words that describe the destination (like beach, cultural, adventure)
- avg_cost_usd: Average cost to visit in USD
- safety_rating: A score from 1 to 5 showing how safe it is

This data helps us find places that match what a user is looking for.

2. Weather Dataset (weather.csv)

Why it exists: Some destinations are best visited in specific months. This file helps us recommend places based on the season and expected weather.

What's inside:

- destination: Must match a destination in the destinations file
- month: The month of the year (like January or July)
- weather: Short description of the weather
- seasonal_rating: A score (1 to 5) of how good that month is to visit that place

This helps us answer questions like: "Where should I go in January that has great weather?"

Connection:

- destination in this file should match destination in destinations.csv

3. Members Dataset (members.csv)

Why it exists: This file represents the users of the travel app. Each member has basic information and a stated travel preference.

What's inside:

- member_id: A number that uniquely identifies each traveler
- name: Traveler's name
- age: Their age
- preference: What kind of travel they like most (like adventure, luxury)

This allows us to find destinations that fit a person's travel style.

4. Trips Dataset (trips.csv)

Why it exists: This file records past trips taken by members. It's useful for learning from real user behavior. If someone new joins the app, we can look for travelers with similar traits and see where they went.

What's inside:

- trip_id: Unique ID for the trip
- member_id: Refers to a member in the members file
- destination: Refers to a place in the destinations file
- cost_usd: How much the trip cost
- activities: List of activities the person did during the trip

This dataset helps us find patterns like: "People who like nature and are in their 30s often travel to Bali."

Connections:

- member_id → from members.csv
- destination → from destinations.csv

How Everything Connects
Members — < trips >--- destinations
                |
            weather

- A member can take multiple trips
- Each trip goes to one destination
- Each destination has weather info for each month

How This Helps Recommendations
Using these datasets, the system can:

- Recommend places that fit someone's style, age, budget, and preferred time of year
- Suggest top-rated destinations for each month
- Highlight destinations with the best value for the money
- Show what similar travelers have done in the past
- Suggest hidden gems and seasonal picks