Tourism and Weather Analysis Project Overview

Tourism, a dynamic and multifaceted phenomenon, is profoundly influenced by diverse factors. This project seeks to unravel the intricate relationship between weather patterns and tourism trends across 27 selected countries. The analysis integrates two datasets: a Kaggle dataset encompassing essential tourism details and weather data obtained from a dedicated API.

Dataset: The Kaggle dataset includes key information such as Trip ID, Destination, Start Date, End Date, Duration (days), Traveler Details (Name, Age, Gender, Nationality), Accommodation Details (Type, Cost), and Transportation Details (Type, Cost). The additional weather dataset obtained from the API enriches the analysis with real-time weather conditions across the selected destinations.

Analyses and Visualizations Planning to Perform:

Weather Impact on Tourism:

- Visualize the correlation between weather parameters and the number of trips to various destinations.
- Explore whether specific weather conditions attract more tourists to certain locations.

Temporal Trends:

- Conduct a time series analysis of weather patterns and overlay it with the number of trips over time.
- Investigate how seasonal changes in weather impact the volume of tourism.

Weather and Trip Duration:

- Explore the relationship between weather conditions and the duration of trips.
- Visualize average trip durations based on different weather scenarios.

Destination-specific Weather Preferences:

- Analyze the preferred weather conditions for specific destinations.
- Investigate whether certain destinations are more popular during specific weather seasons.

Accommodation Preferences and Weather:

- Visualize the distribution of accommodation types based on weather conditions.
- Explore whether tourists prefer specific types of accommodations during specific weather patterns.

Cost Analysis in Relation to Weather:

- Analyze the correlation between accommodation and transportation costs with different weather conditions.
- Visualize cost variations based on weather scenarios.

Weather and Transportation Preferences:

- Investigate the preferred mode of transportation based on weather conditions.
- Visualize whether weather influences the choice between flights, trains, or cars.
- **Gender-specific Analysis:**
- I'll extend our analysis to explore how weather conditions may correlate with the safety of female travelers. By examining the distribution of gender data alongside weather patterns, I aim to identify potential correlations and patterns that can contribute to understanding the safety implications for women during different weather scenarios.
- **Factors for Women's Safety:**
- I'll explore whether certain weather conditions impact women's travel preferences, focusing on aspects such as destination choices, accommodation preferences, and transportation modes. This nuanced analysis aims to uncover insights that can guide female travelers in making informed decisions about their journeys.

I'll blend Matplotlib and Seaborn for solid visuals, incorporate Plotly's interactivity, and leverage Folium for geography.I will try to create a dashboard that shows tourism trends with moving charts and maps which is more interactive.