

## **SI 507 final project proposal**

### **Topic: examined the relationships between tour places**

Obtain search history data:

I will explore various publicly available datasets or APIs that provide access to user search history data related to tourist destinations. This may include datasets from travel websites, search engines, or social media platforms.

Alternatively, I will explore options for simulating or generating synthetic search history data to demonstrate the feasibility of the project if access to real user data is restricted.

Build a network of search history relationships:

Whenever a user does a search, I can record the places they search for and establish the relationships between these places as edges in the graph data structure. For example, if a user searches for Los Angeles and San Diego at the same time, I can create an edge between the two locations to indicate that they appear simultaneously in the user's search history.

Analyze co-occurrence frequency:

Based on user search history data, I can analyze co-occurrence frequency between different locations. If certain locations frequently appear in the same search history, I can assume that there is some kind of correlation between them.

Recommend relevant places:

Based on the results of the analysis, I can recommend other places for users that are associated with places that appear in their search history. For example, if a user frequently searches for Orlando, I can recommend other locations adjacent to or like those two locations to meet their travel needs.

Interactive query:

Build an interactive program that allows users to enter locations they are interested in and then get other location recommendations related to those locations. I can also provide filtering options that allow users to filter and customize locations according to different needs.

By doing so, I can design a place recommendation system that is relevant to a user's search history and helps them discover other places that are related to their location of interest, thereby enriching their travel experience.