Vancouver Travel Itinerary Recommendation

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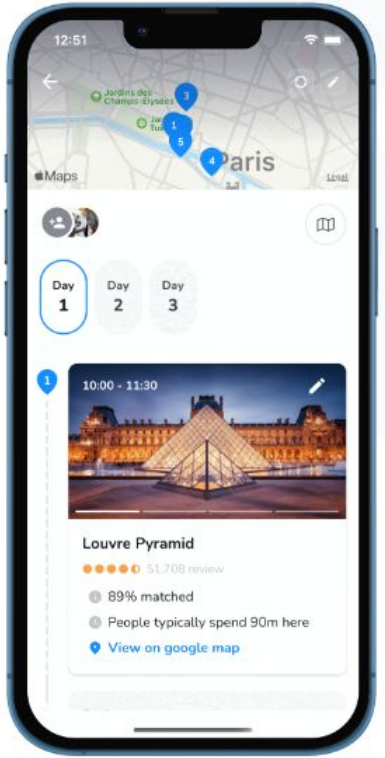
Vancouver Travel Itinerary Recommendation

- Using machine learning, create an automated schedule exploring Vancouver based on user input
- Opportunities
  - Travellers
    - Save time
    - Blueprint
  - Businesses
    - Frequently recommended results in higher sales
    - Customer behavior/preferences
    - Optimize resources



Inspiration: iplan.ai

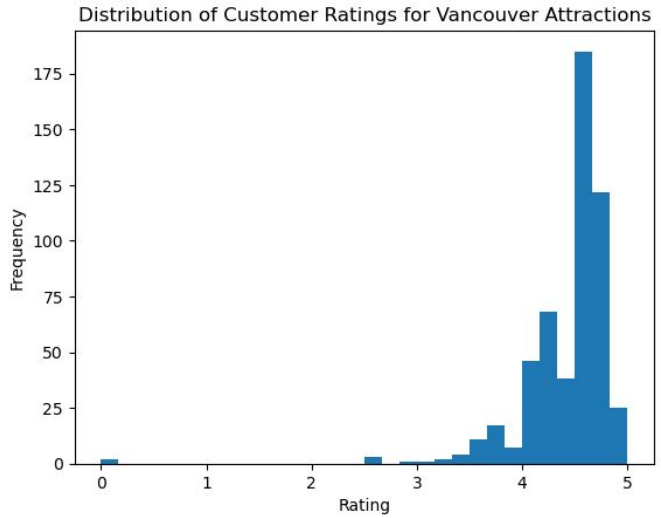
Travel with Data Science

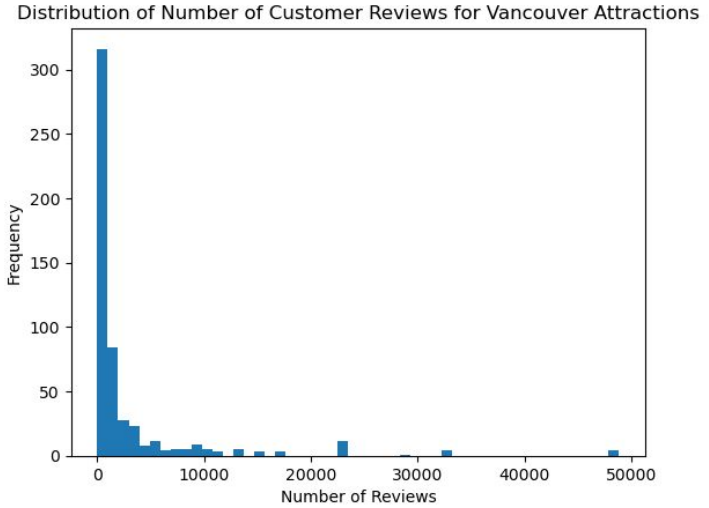
1. User Input
    a. Duration
    b. Interests
    c. Speed
2. Model: Recommendation System
    a. Ratings
    b. Reviews
    c. Location
    d. Categories
3. Output
    a. Curated Schedule and Map of exploring Vancouver
        i. Attractions
        ii. Restaurants

About the Dataset

- Dataset
  - Google Maps Extractor
  - Geoapify
- Data quality concerns
  - Large amounts of duplicated data
  - Large Main Categories
- Findings from preliminary EDA
  - Rating is skewed towards range of 4-5 stars out if 5
  - Number of Customer Reviews is skewed towards 0-5000 reviews

```
main_category
Park                   127
Tourist attraction      69
Historical landmark     51
Shopping mall           31
Scenic spot             24
                       ...
Vegan restaurant         1
Lebanese restaurant      1
Heritage museum          1
Recreation center        1
Playground               1
Name: count, Length: 75, dtype: int64
```





Next Steps

- Further data collection/cleaning
  - Duplicated Data ➜ expand scope beyond Vancouver
  - Distance ➜ remove repeated headers from data merging
- Data processing
  - Main Category ➜ move smaller counts of categories to form 4 major categories
- Data visualization ➜ geography
- Feature engineering
  - Transforming reviews and ratings
- Baseline modeling
  - Unsupervised Learning ➜ Clustering

Questions?