
# Airbnb Rental Property Demonstration Project

Teammates

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# Introduction

- Tourist are looking for high-end properties for near-to or low-end prices
- Airbnb has revolutionized the travel industry
- Often offer better amenities at similar prices
  - multiple rooms
  - Stove
  - Grill
  - Private parking

# Purpose

- Develop an app that:
  - Demonstrate proficiency in Leaflet, JavaScript, and Plotly
  - Visualize Airbnb properties in major cities throughout the US
  - Provide travels with maps:
    - Price
    - Density

# Data and Data Delivery

- Data were downloaded from Kaggle
- >218,000 unique IDs[rows]
- 17 columns
- Data were modified
  - Dropping duplicates by longitude/latitude
  - Dropping columns
  - Dropping data from select cities
- Final dataset contained
  - 12 columns
  - 165,733 rows
- Final data were exported into an SQLite file

# Software and Data Steps

- Python – data manipulation
- SQLite – read into VS Code
- HTML –display individual pages
- JavaScript – display visualizations
- LeafLet – overlay maps
- Plotly – add figures to pages
- jQuery – works in conjunction with JavaScript
- Chart.js – visualize charts
- Flask – initial deployment software
- Git – push to Github

# Visualization – Home Page

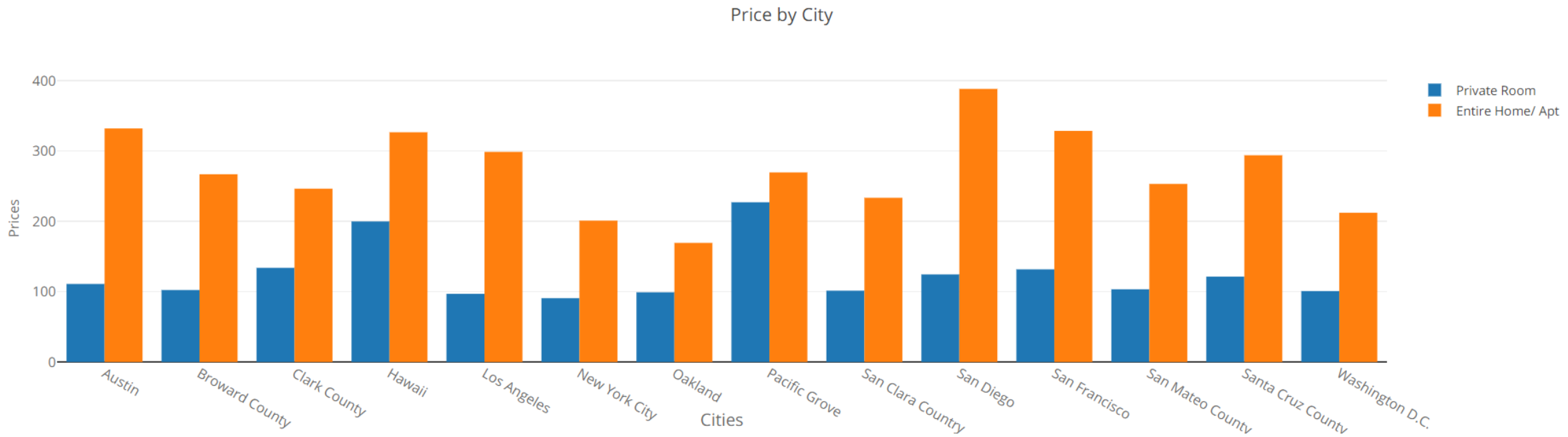
# Plotly Plot

Group 6

Home **Dashboard** Maps About

## Rental Properties by City

Graphical display of the average rental price per night by rental property types in select cities.



# Plotly Plot

## Airbnb rental properties by rental types and city

Figures A and B below relate the number of properties by rental type and city, respectively.

Figure A: Count of Rental Properties By Rental Type

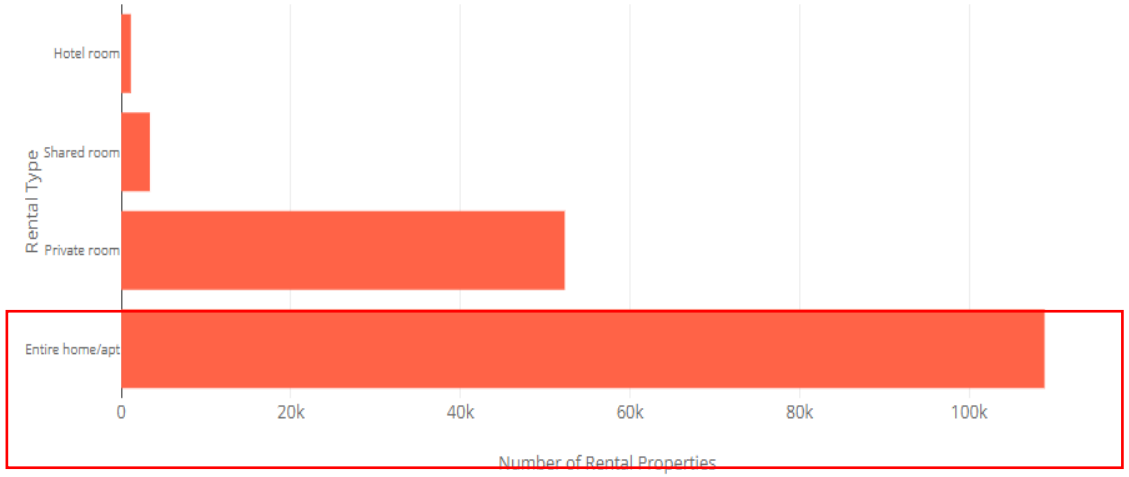
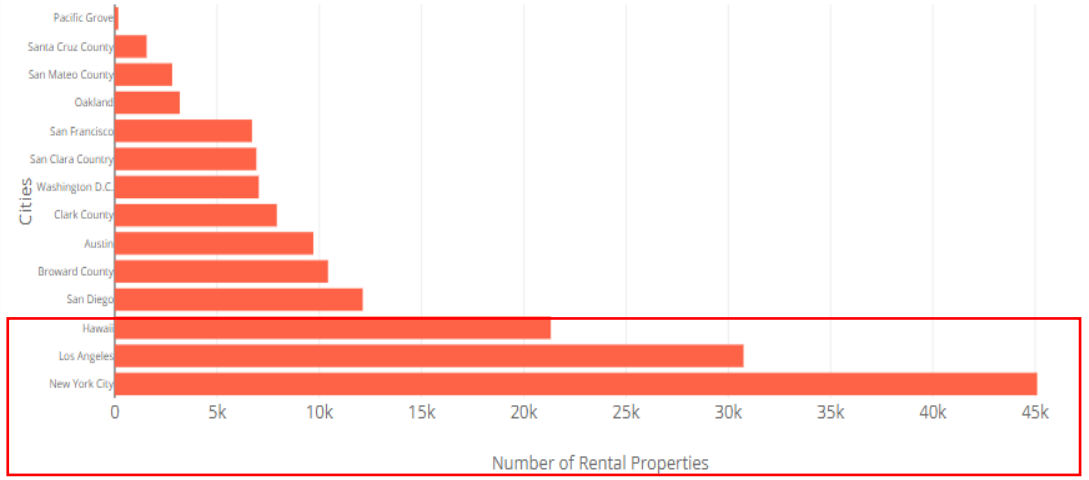


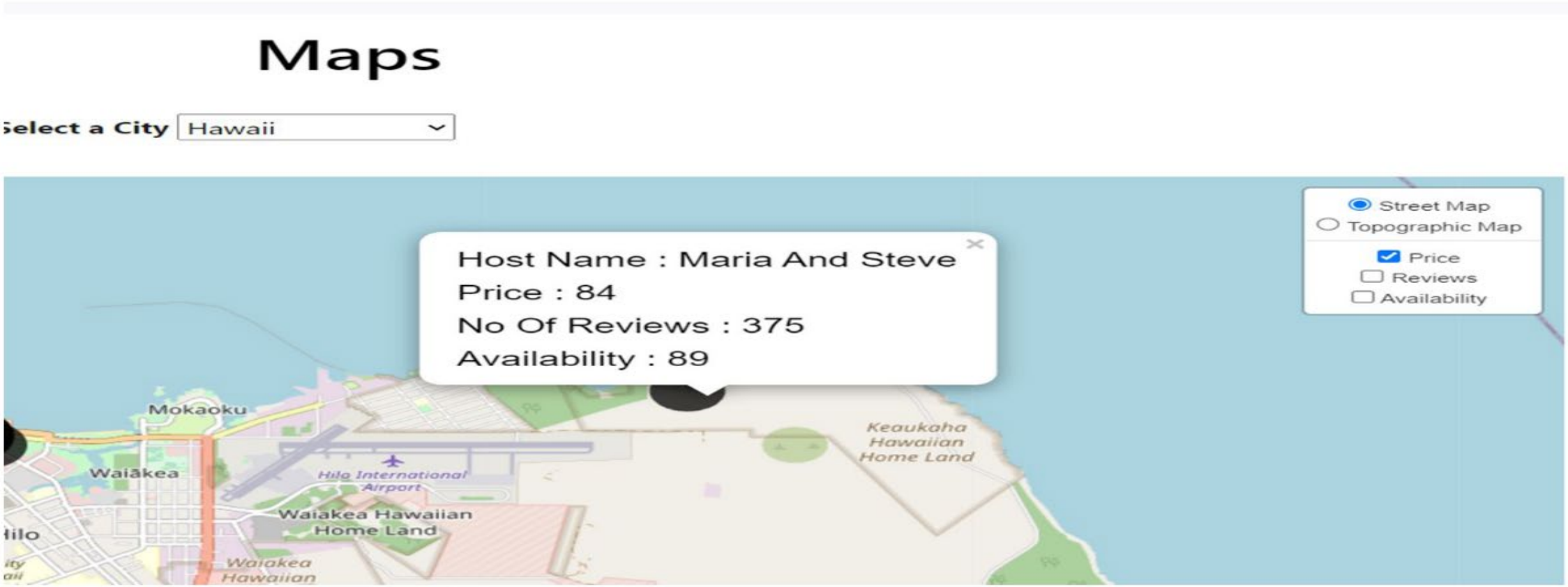

Figure B: Count of Rental Properties By City



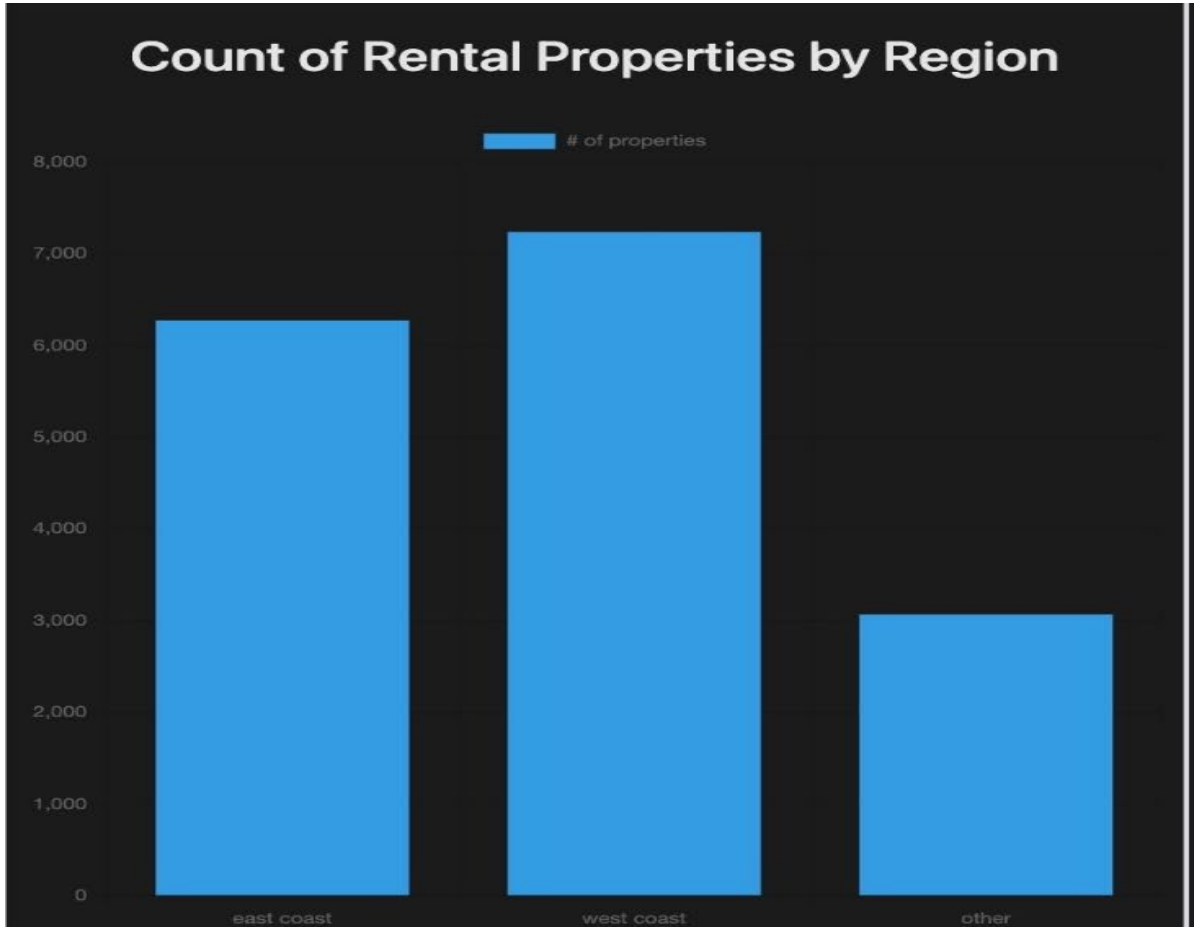

Entire home/apartment

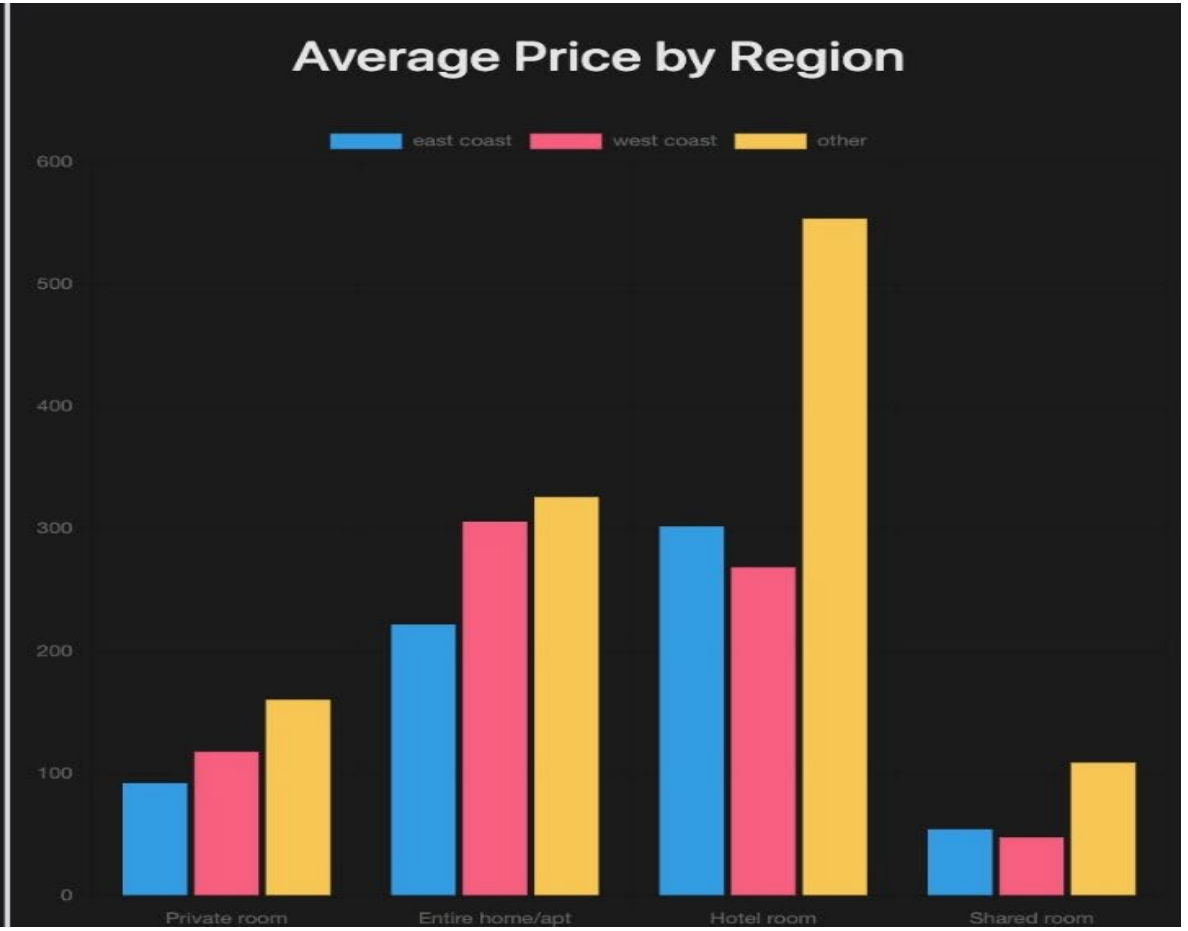
NY, LA, and HI

# LeafLet-Map

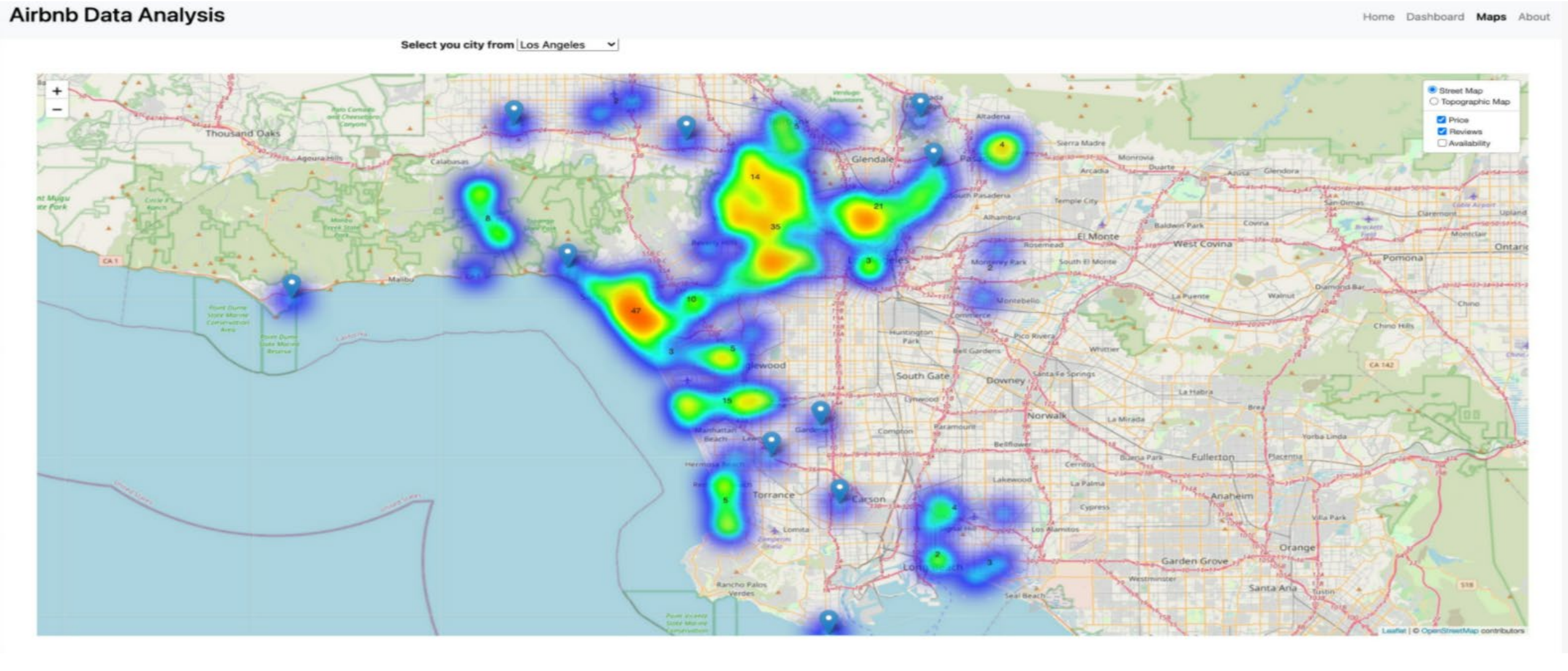

Maps
Select a City
Hawaii
Host Name : Maria And Steve
Price : 84
No Of Reviews : 375
Availability : 89
Street Map
Topographic Map
Price
Reviews
Availability
Mokaoku
Waiākea
Hilo International Airport
Waiakea Hawaiian Home Land
Keaukaha Hawaiian Home Land
Waiakea Hawaiian

# Chart.js - Plot



# LeafLet - Cluster Heatmap



# Business Use Cases

- End Users (Homeowners/Renters):
  - Provide locations based on sporting events
  - Homeowners who want to get into a new business
  - Ratings and Reviews
  - Geolocate properties
    - Nearby attractions
    - Airports
    - Conference centers
    - Historical sites
    - Beaches

# Conclusion

1. We created a Heroku app that displays multiple visualizations

2. We utilized two new JavaScript libraries: jQuery and Chart.js

3. Different business use cases were provided

# Teammates

Ling Lu

Software Engineer

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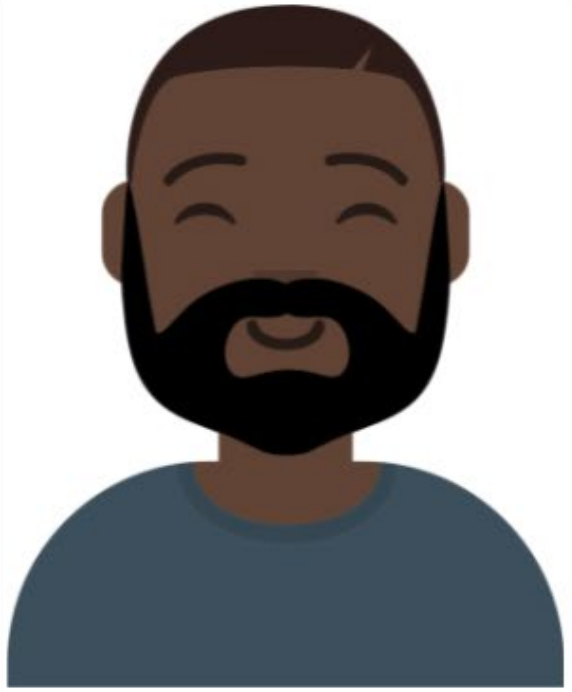
Software Engineer



Raheem Paxton

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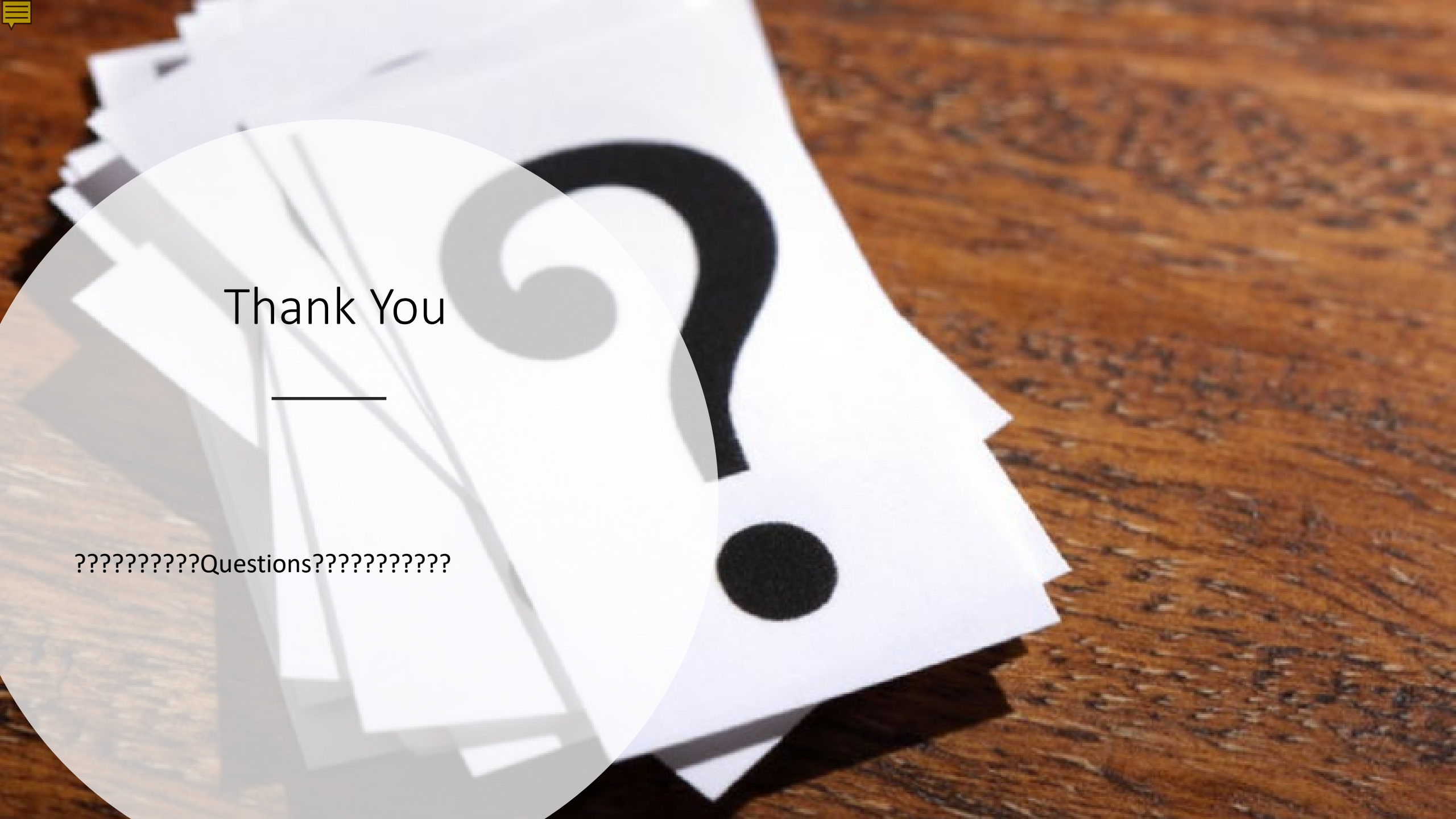

# Thank You

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