



ENHANCING HOST STRATEGY USING DATA ANALYSIS ON AIRBNB

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PROJECT OBJECTIVES

1

Assess Airbnb hosting strategies across diverse locations through data analysis

2

Uncover patterns in listing prices, occupancy rate, and the influence of amenities on revenue

3

Evaluate seasonality, local events, and neighborhood effects on demand and profitability

4

Equip Airbnb hosts with actionable strategies for optimizing pricing, maximizing occupancy, and enhancing guest experience

5

Offer data-driven guidance to investors on identifying high-demand neighborhoods for profitable investments

DATASET OVERVIEW



DATA SOURCE

Airbnb Open Data

Inside Airbnb

<https://insideairbnb.com/get-the-data/>



CITY

San Diego, California,
USA



DATASETS

- Listings
- Calendar
- Reviews



DATASETS



LISTINGS

- Contains detailed data on individual Airbnb listings
- Including attributes like price, number of bedrooms, and amenities



CALENDAR

- Provides daily availability and pricing information for each listing over a specified period



REVIEWS

- Includes reviews for each listing, detailing the date and reviewer information

LIBRARIES

01

`folium`

A library for creating interactive maps using Python

03

`wordcloud`

A library for creating word cloud visualizations from text data

05

`matplotlib.pyplot`

A plotting library for creating static, animated, and interactive visualizations in Python

`folium.plugins.MarkerCluster`

A plugin in Folium for clustering map markers based on proximity

`datetime`

A module for handling date and time in Python

`sklearn.feature_extraction.text.CountVectorizer`

A module in scikit-learn for converting a collection of text documents to a matrix of token counts

02

04

06



CODE DEMONSTRATION

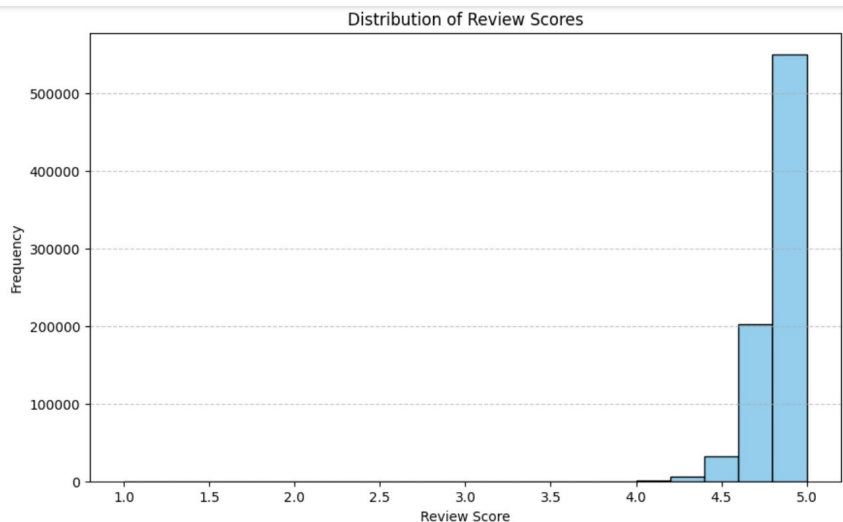


KEY INSIGHTS



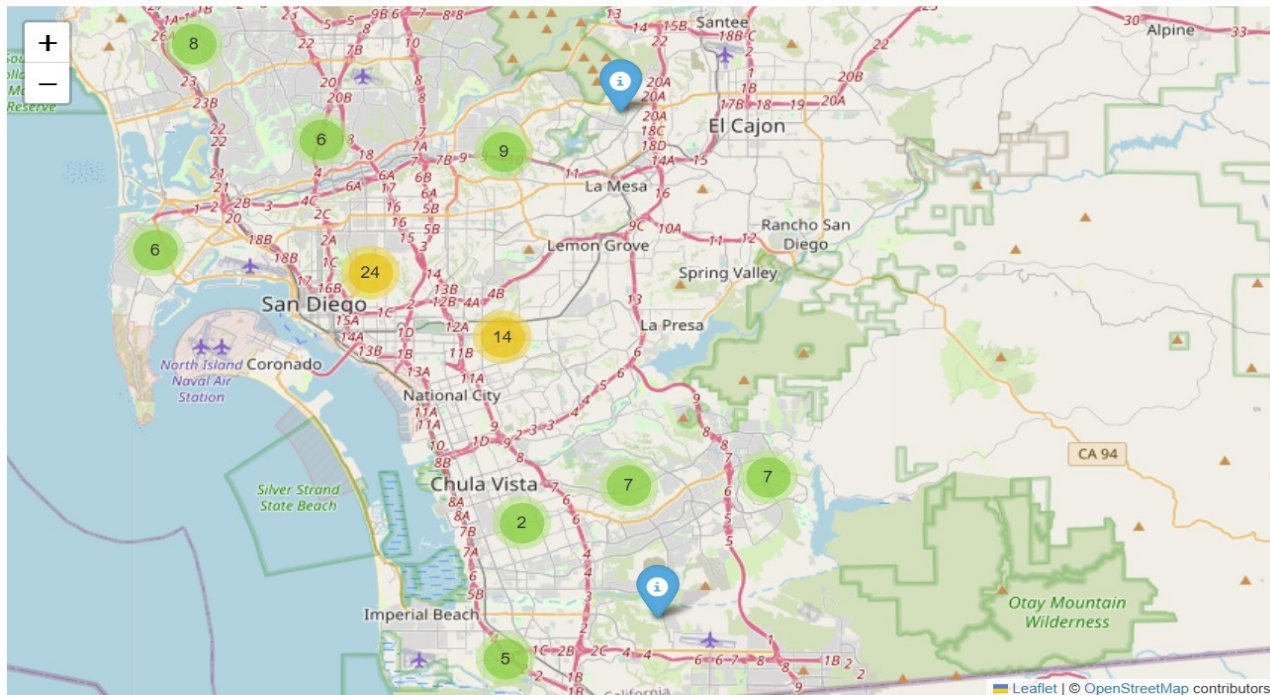
Q1

KEYWORD ASSOCIATION WITH REVIEW SCORES AND POPULARITY



Q2

NEIGHBORHOOD INFLUENCE ON PRICES AND AVAILABILITY



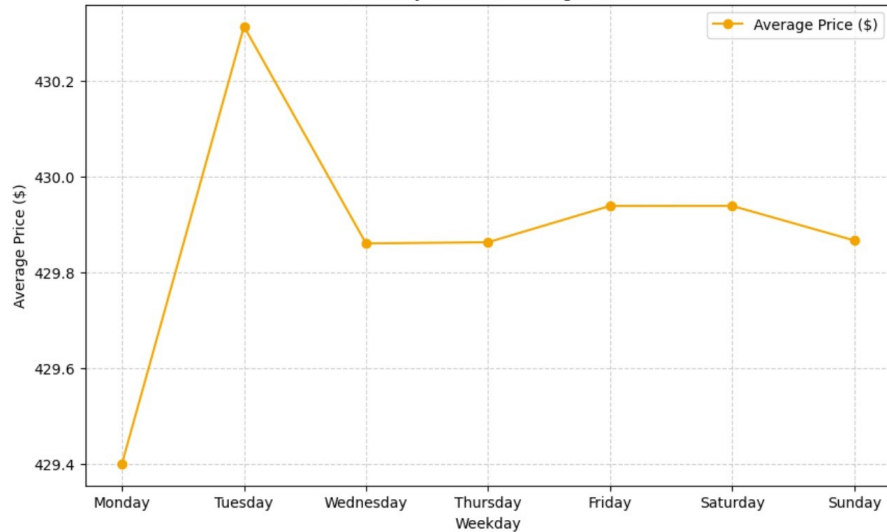
Q3

SEASONAL FLUCTUATIONS IN LISTING PRICES

Monthly Trends in Average Price

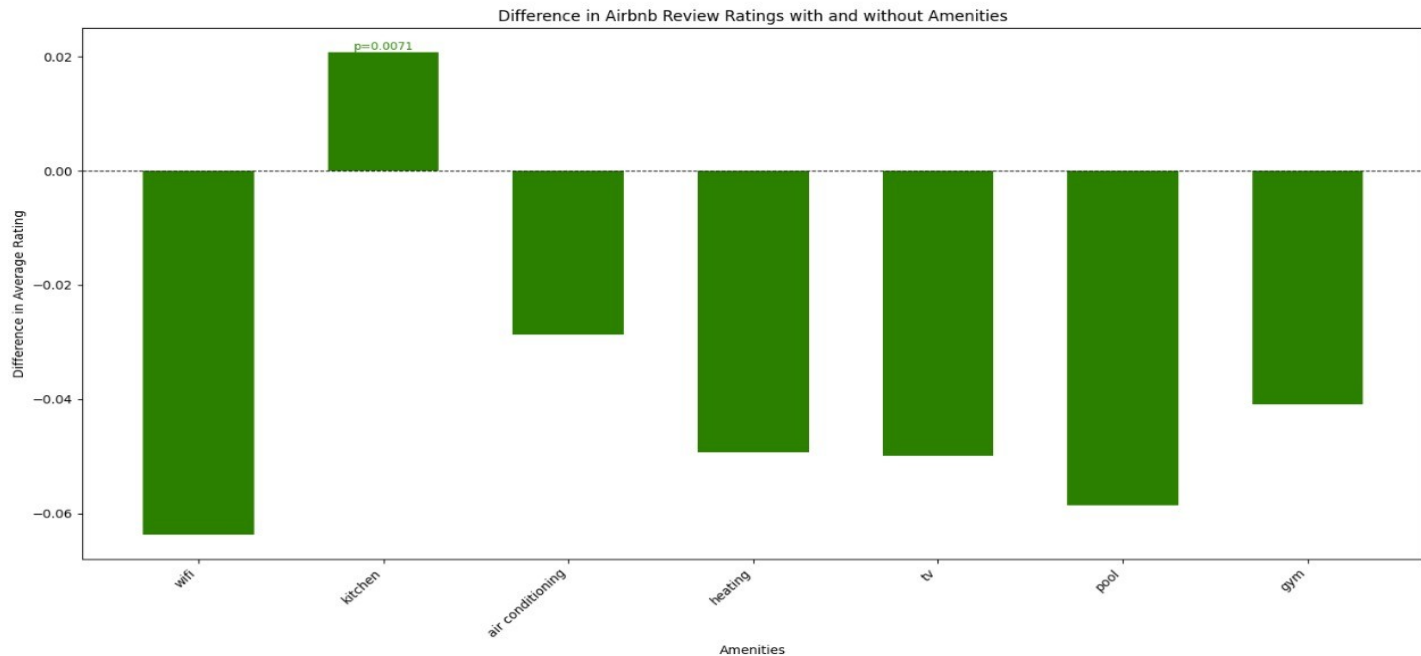


Weekday Trends in Average Price



Q4

EFFECT OF AMENITIES ON AVERAGE RATINGS



Q5

IMPACT OF LOCAL HOSTS ON BOOKING RATES AND REVIEW SCORES

Booking Rate - Local Hosts: 47.60%

Booking Rate - Non-Local Hosts: 41.73%

Average Review Score - Local Hosts: 4.83

Average Review Score - Non-Local Hosts: 4.78

CONCLUSION

- **Optimized Hosting Strategies:** Data insights help hosts enhance guest experiences and maximize revenue.
- **Actionable Investment Guidance:** Identified high-demand neighborhoods and key profitability factors for investors.
- **Focus on Key Factors:** Analyzed pricing, occupancy, amenities, seasonality, and neighborhood dynamics.
- **Competitive Edge:** Equipped stakeholders with strategies to thrive in the dynamic short-term rental market.
- **Significance of Data-Driven Decisions:** Demonstrated the critical role of analytics in fostering success and superior guest experiences.



THANK YOU