

# Analysis of Airbnb Listings

An In-Depth Look at AirBnb Bookings

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# Introduction

## Content:

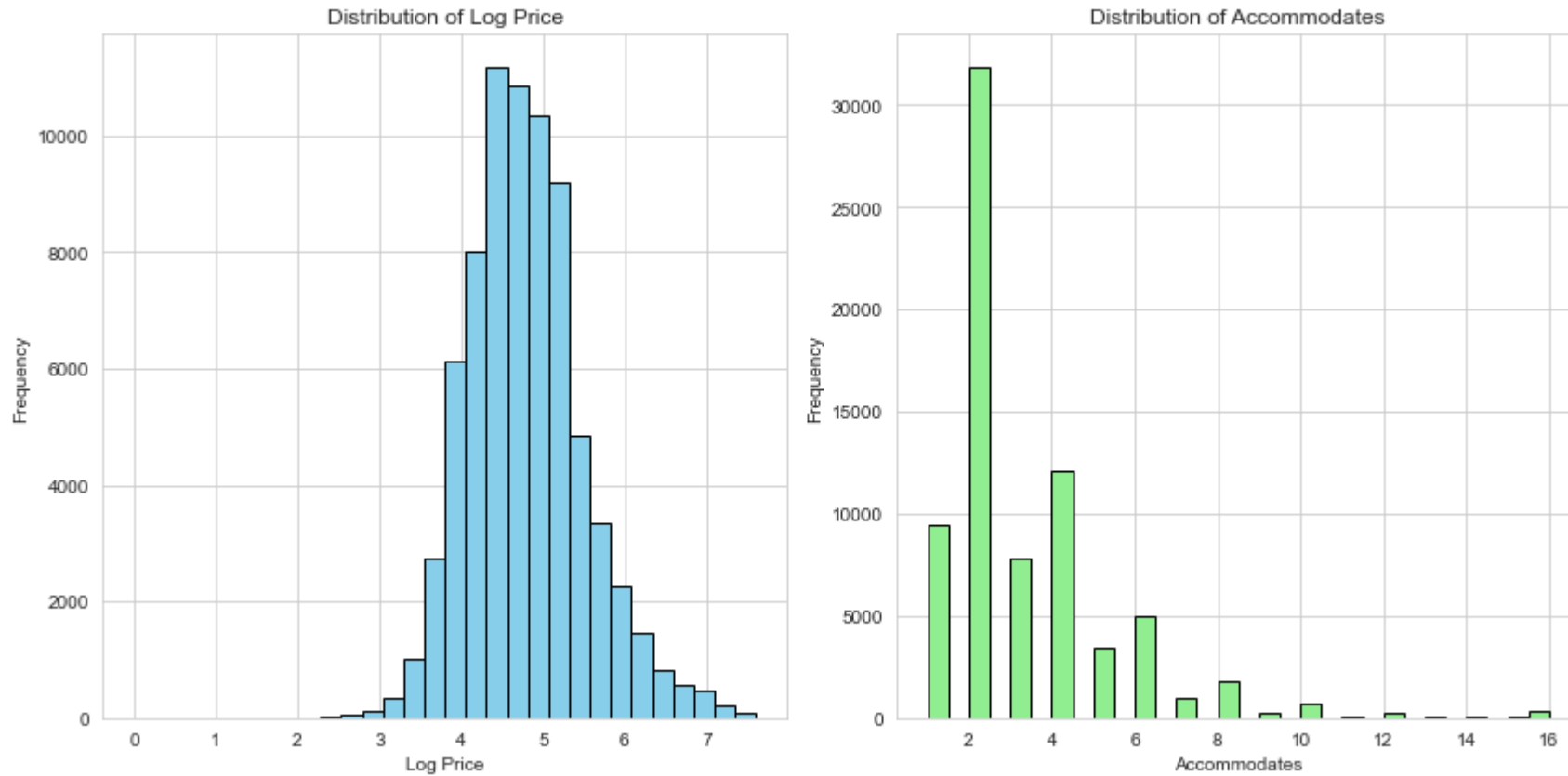
- Overview of the dataset (74,000+ rows of Airbnb listings)
- Key variables analyzed: log price, property type, room type, amenities, review scores
- Objective: To explore the relationship between property characteristics, prices, and guest reviews

# Dataset Overview

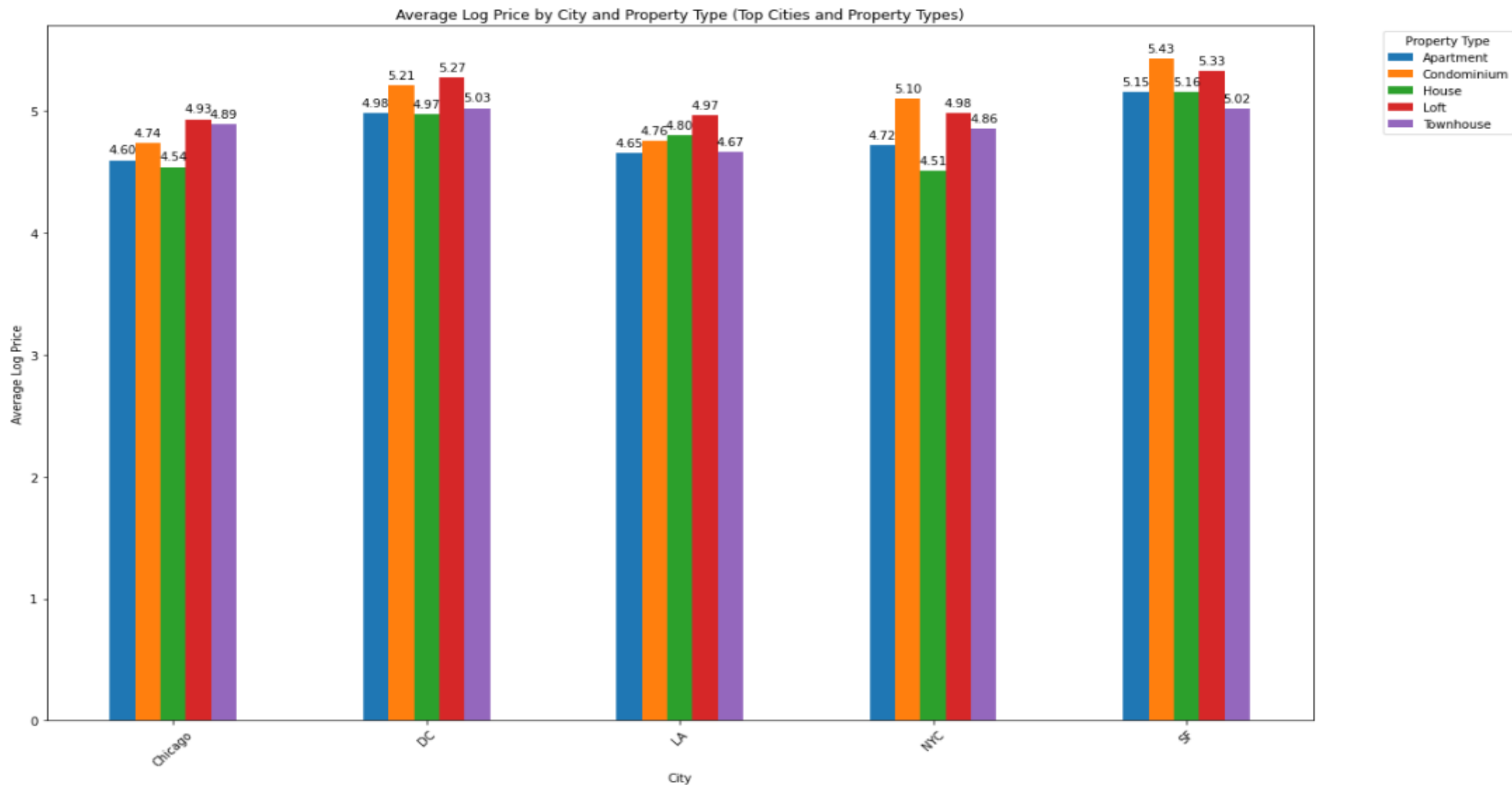
## Content:

- Number of rows: 74,000+
- Key columns: log\_price, property\_type, room\_type, amenities, accommodates, bathrooms, bed\_type, cancellation\_policy, review\_scores\_rating
- Missing values handling (e.g., review\_scores\_rating has significant missing values)
- Created new feature 'number of amenities' from the amenities column to make a new feature which will help us in our analysis and much more

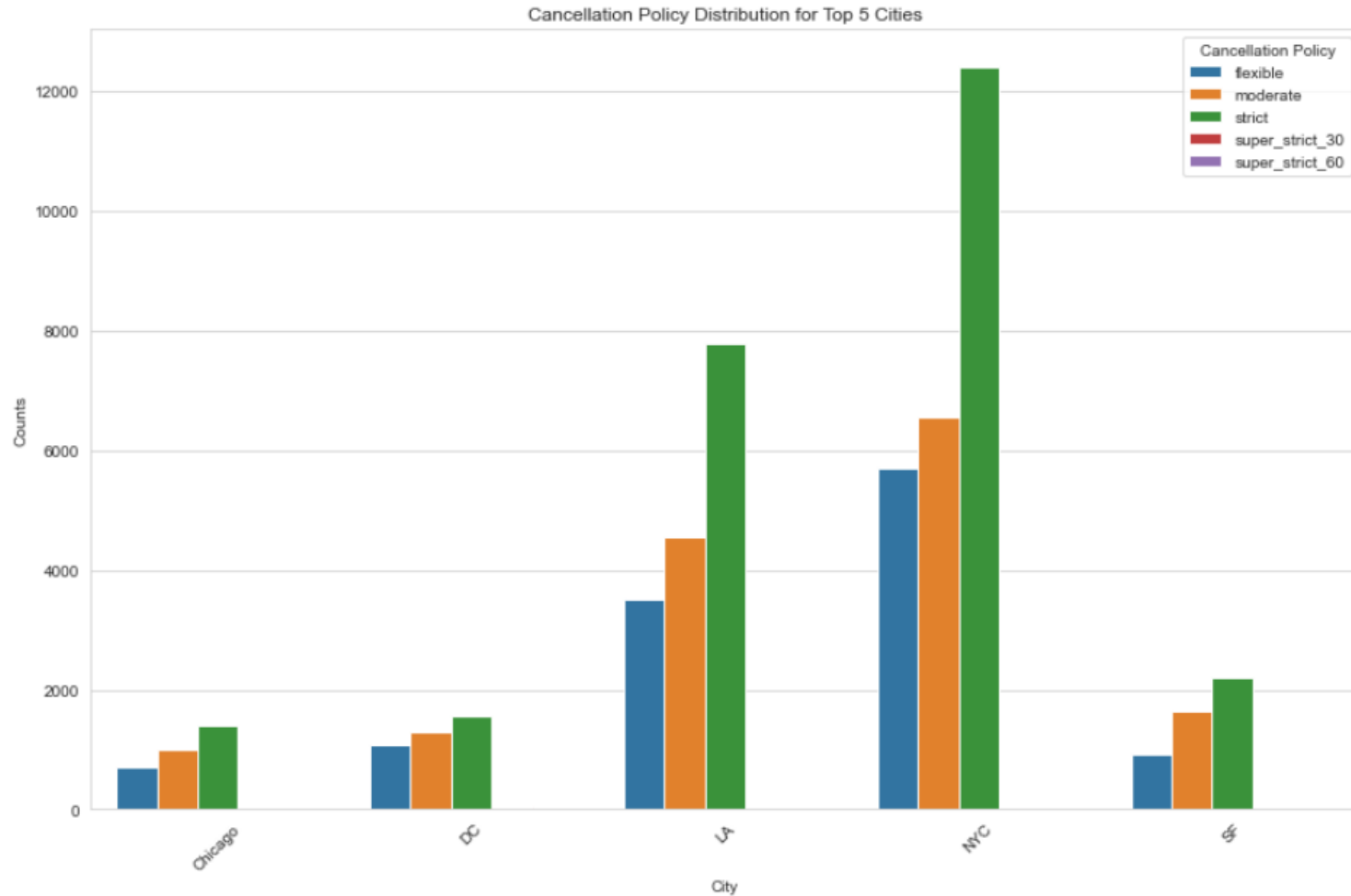
# Distribution of Log Price & Accommodations



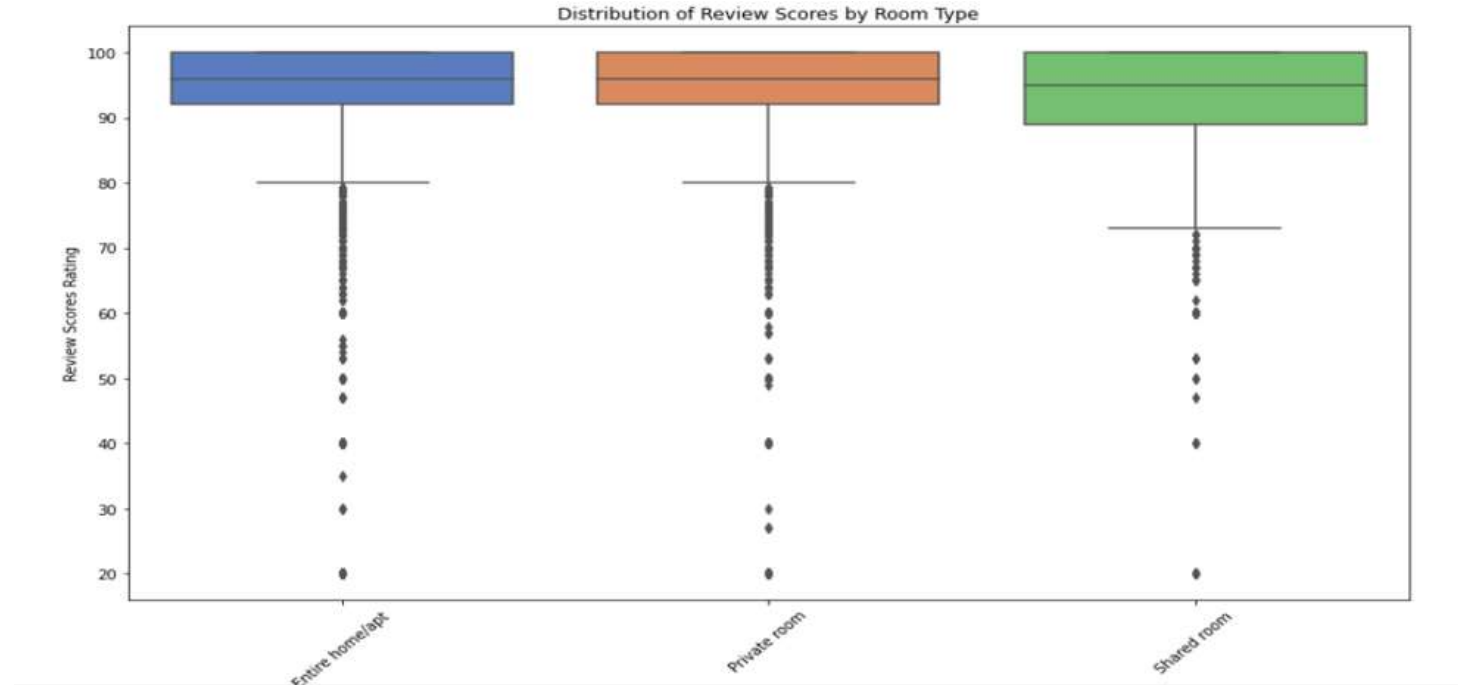
# Distribution and Average Log Price by City and Property Type



# Cancellation Policy Distribution for Top 5 Cities



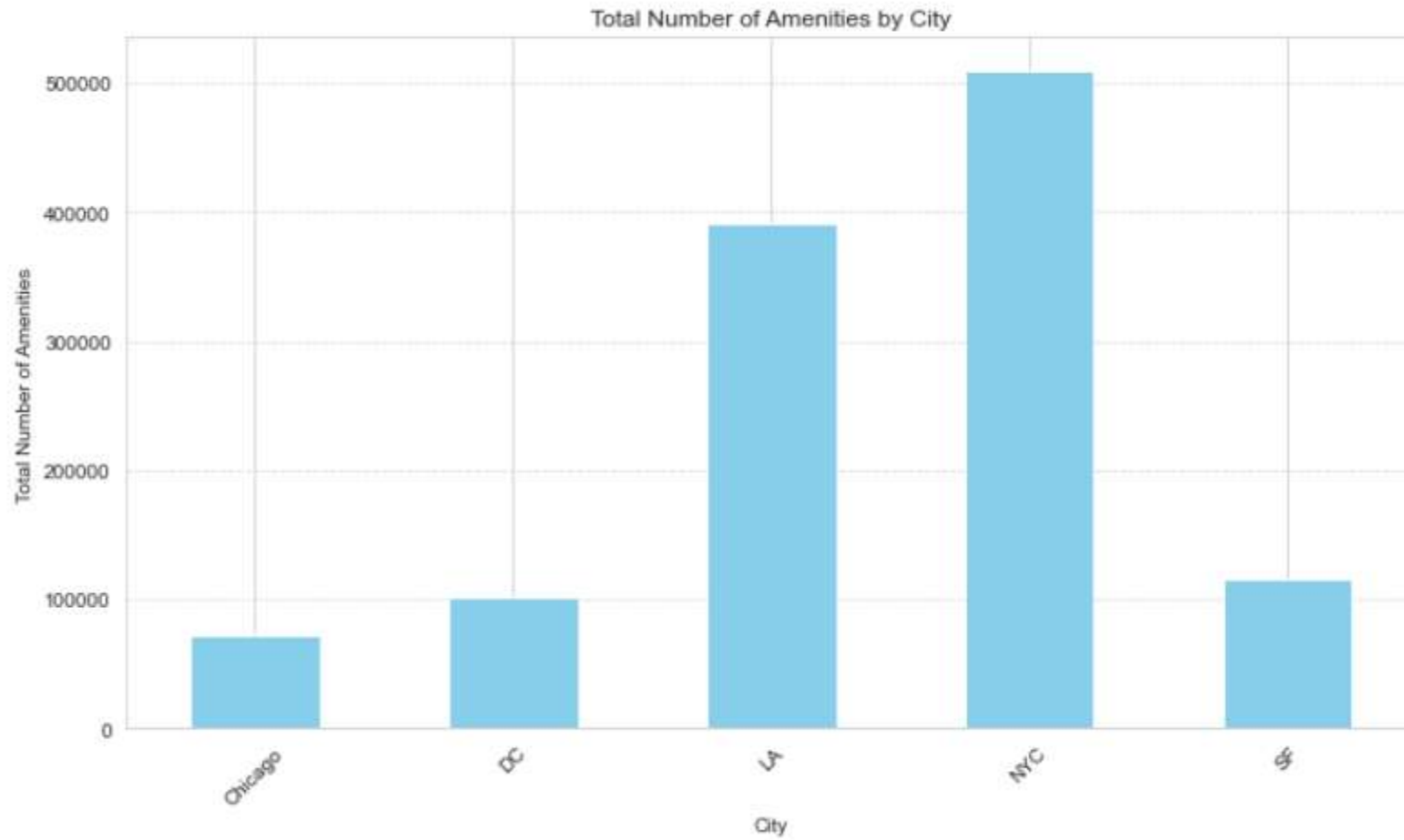
# Review Scores by Room Type



## Insight:

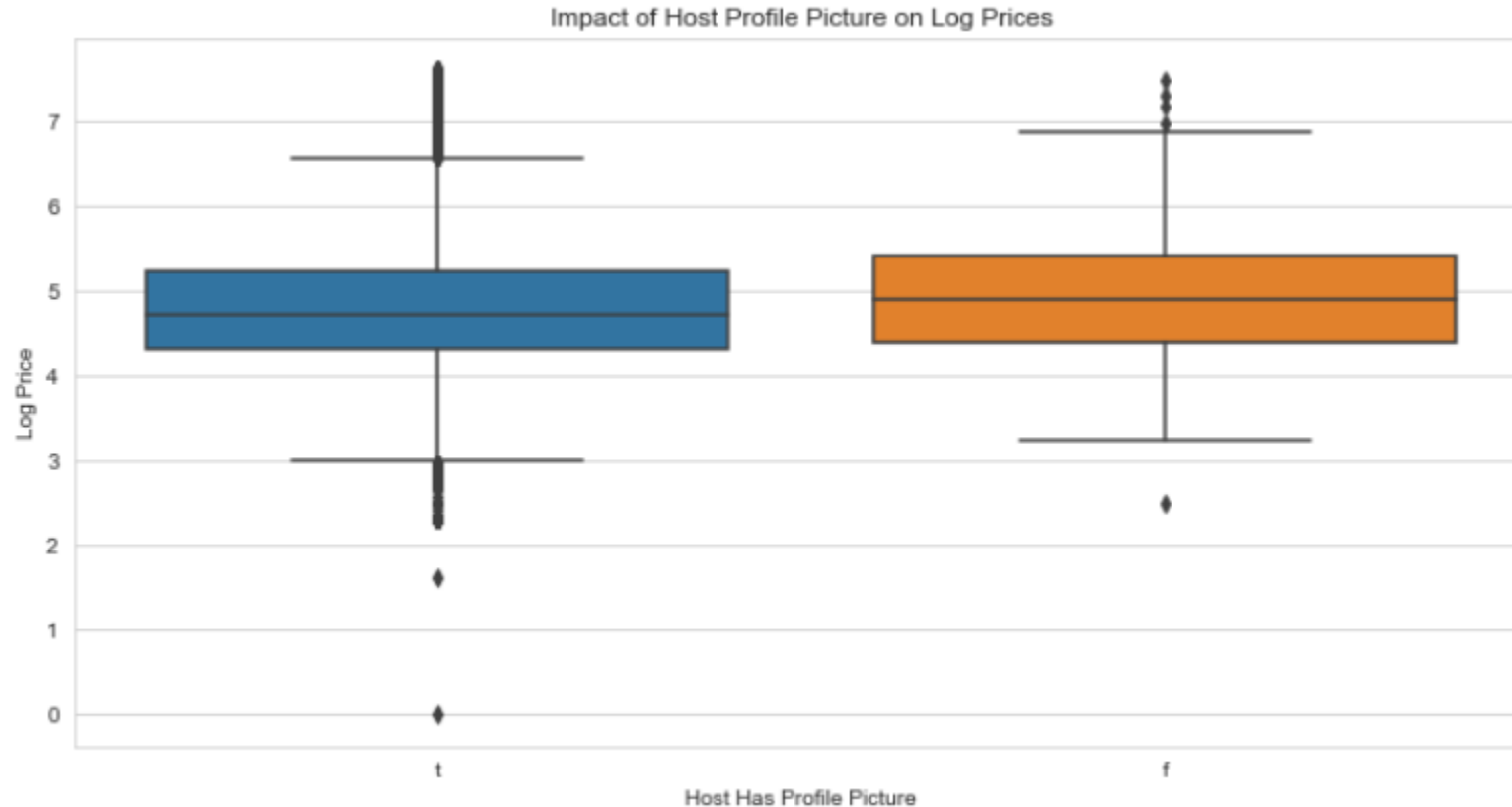
- Entire home/apartments receive slightly higher average review scores than private and shared rooms.
- The variation in review scores is small, indicating generally high satisfaction across room types.

# Top Number of Amenities by City





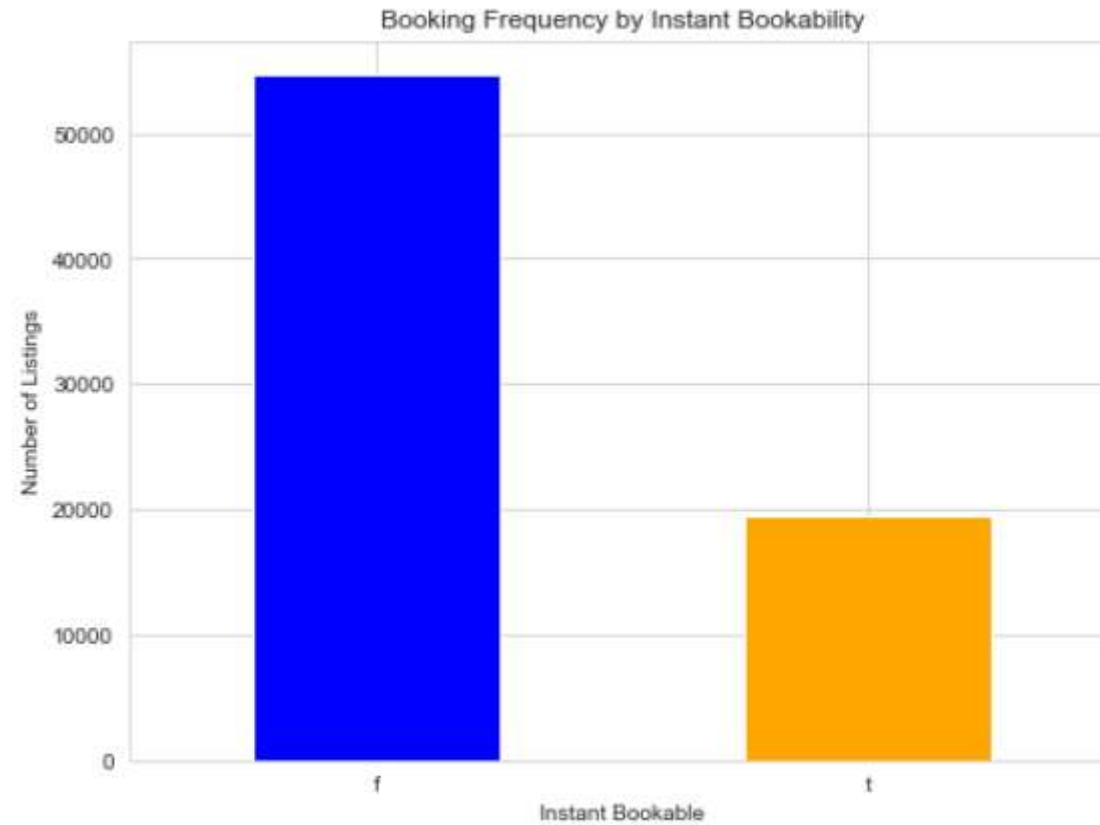
# Impact of Host Profile Picture on Log Price



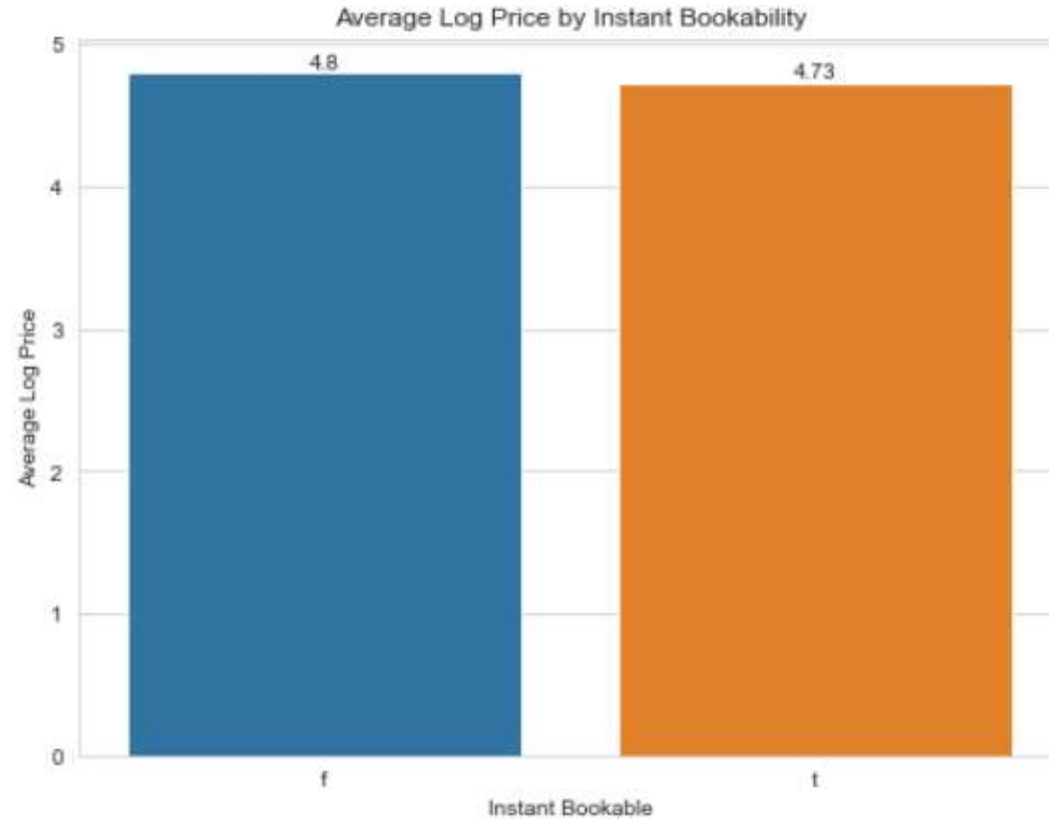
## Insight:

- Listings with host profile pictures tend to have higher log prices.
- Emphasizes the importance of host transparency for potential earnings.

# Booking Frequency by Instant Bookability



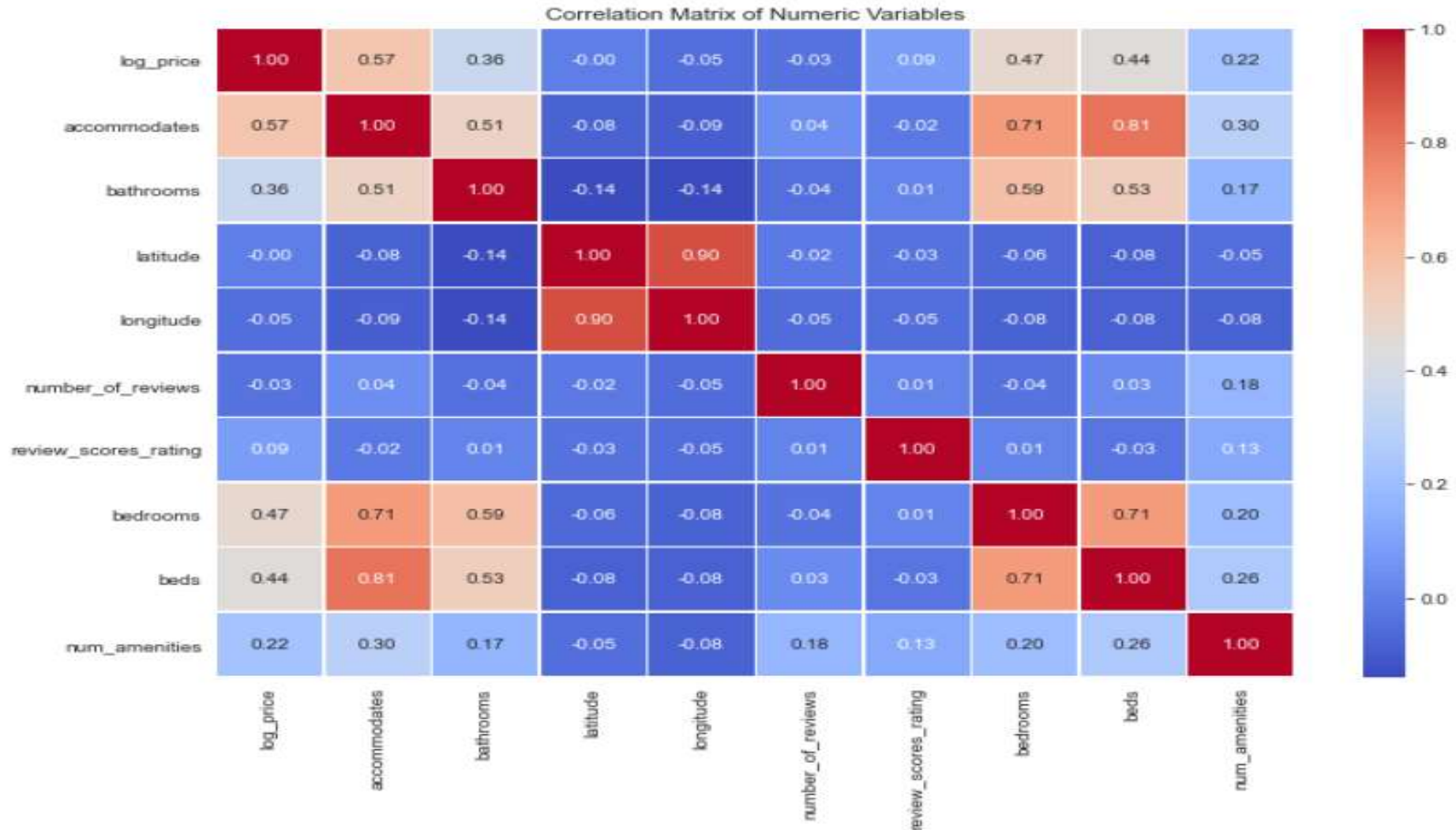
# Average Log Price by Instant Bookability



## Insight:

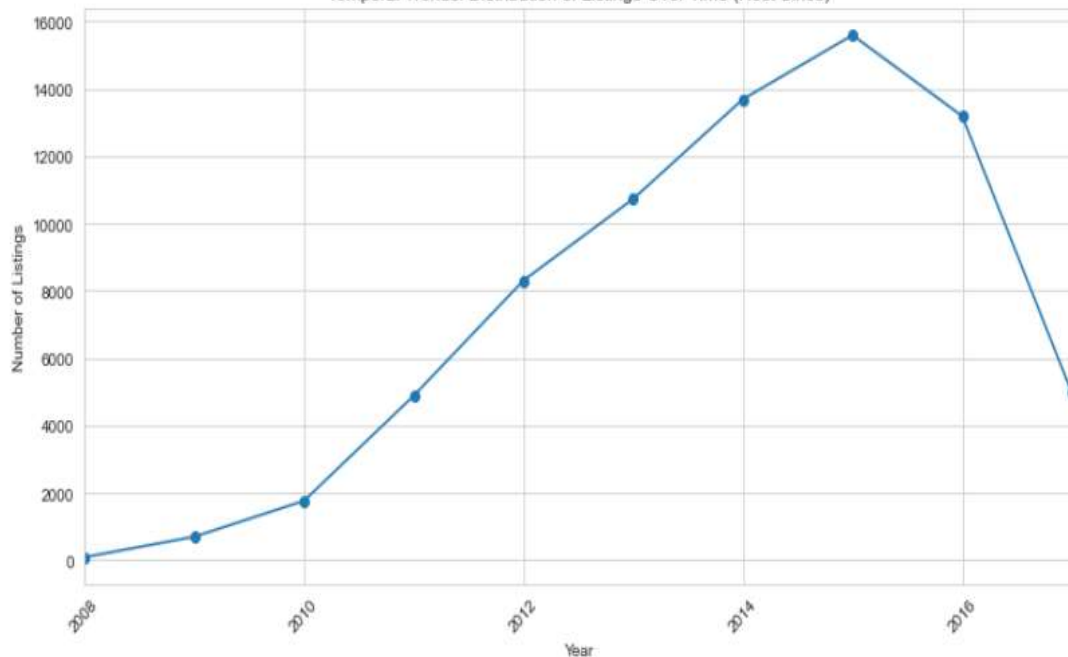
- No significant difference in average log prices based on instant bookability.
- Indicates pricing is not influenced by the instant booking feature.

# Correlation Matrix

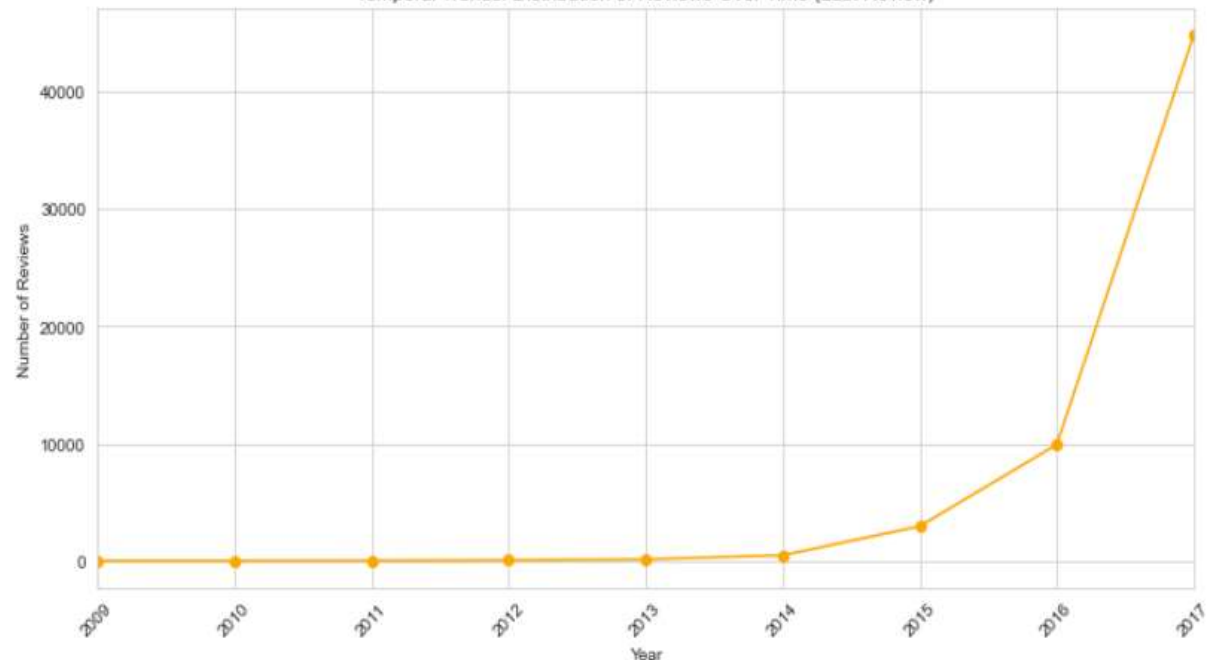


# Temporal Trend: Host Registration and Reviews Over Time

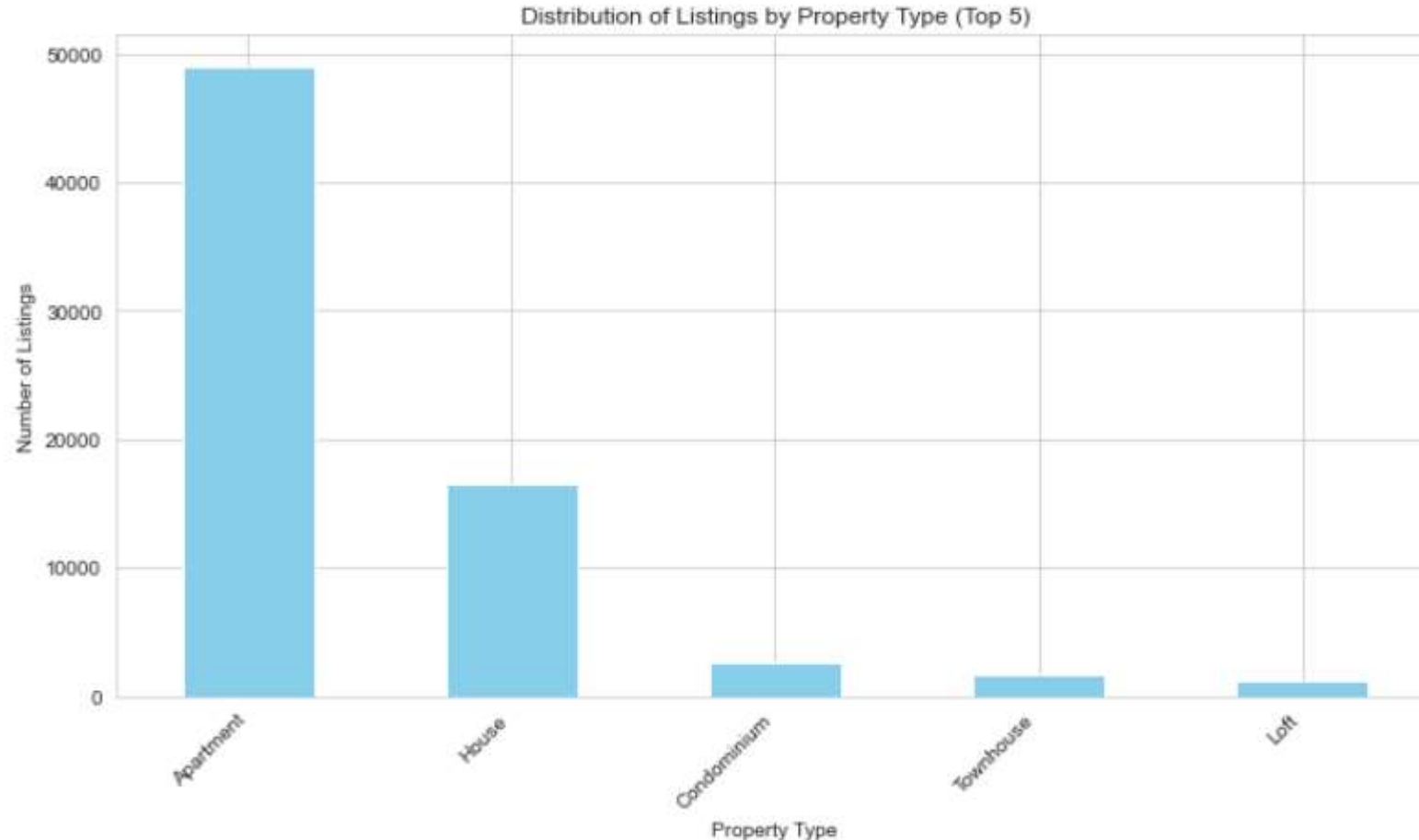
Temporal Trends: Distribution of Listings Over Time (Host Since)



Temporal Trends: Distribution of Reviews Over Time (Last Review)



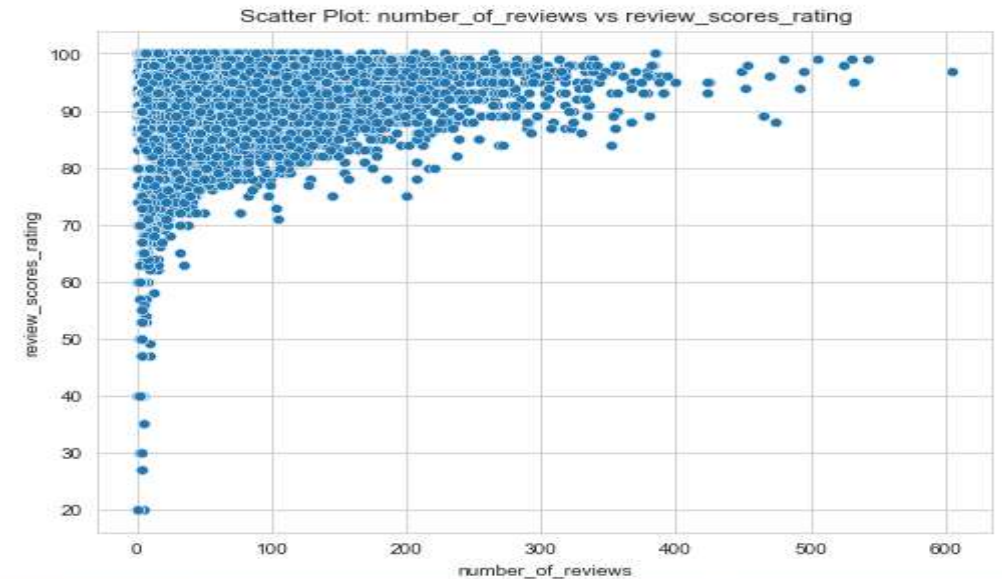
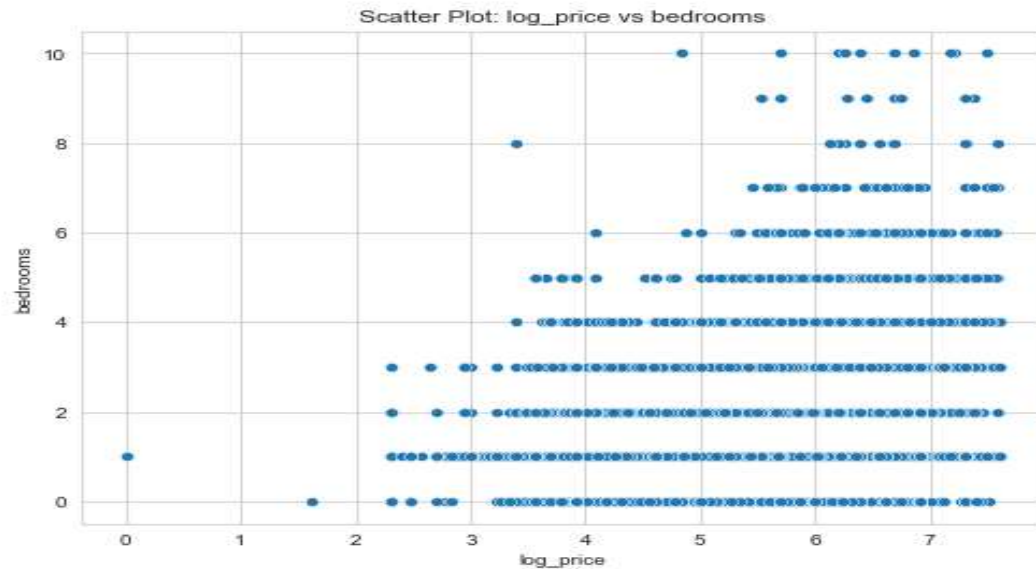
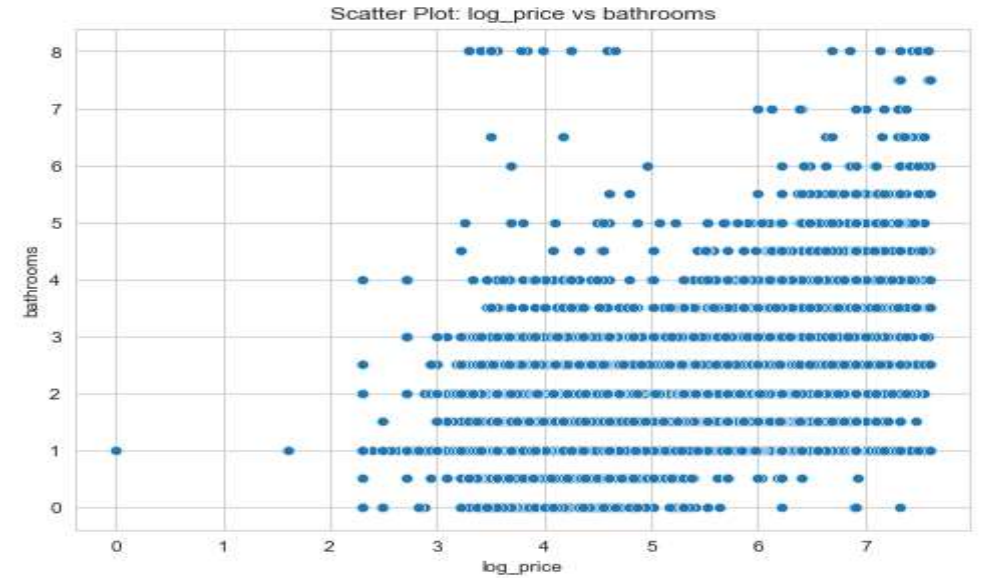
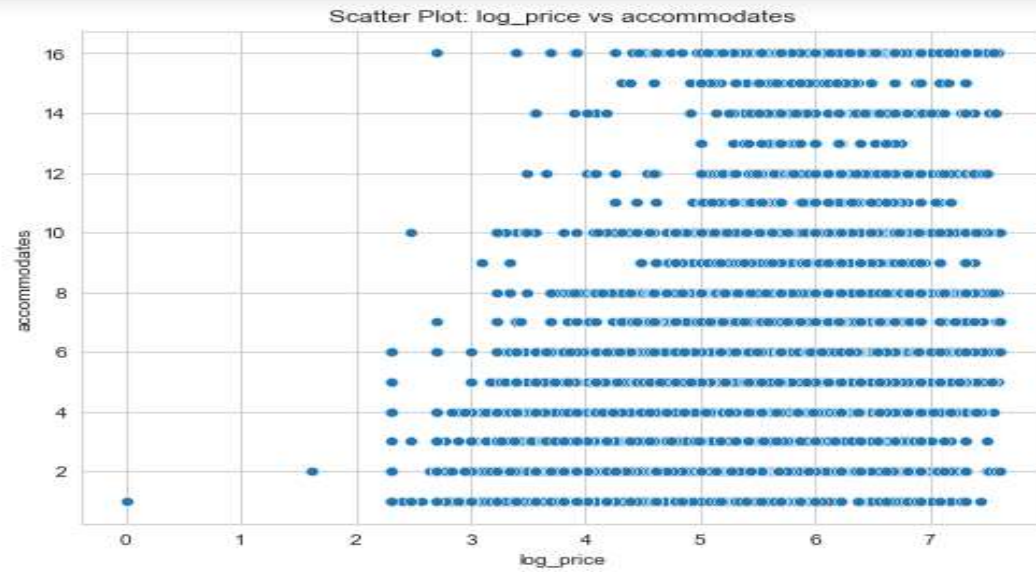
# Distribution of Listings by Property Type



## Insight:

- Apartments have the highest number of listings, followed by houses.
- Reflects the urban nature of many Airbnb markets.

# Scatter Plots



# Conclusion

## Summary of Key Findings:

- Minimal variation in average log prices and review scores across different property types and cancellation policies.
- Significant trends in host registrations and guest reviews over time.
- Importance of amenities, host profile pictures, and instant bookability for higher bookings and pricing.
- Scatter plots and histograms provide a clear visualization of key relationships and distributions within the dataset.