

## **Analysis of Seattle Airbnb Listings Data**

This analysis explores key characteristics of an Airbnb dataset for Seattle, focusing on listing distribution, pricing dynamics, and review patterns. The findings provide insights into the city's short-term rental market.

### **Listing Distribution**

The majority of listings fall under the broad category of "Other neighborhoods" (1326), indicating a significant supply outside traditionally defined areas. Among specific neighborhoods, Broadway (382) and Belltown (369) have the highest number of listings, suggesting these are major hubs for Airbnb accommodations. The University District (267) and residential areas like Wallingford (254) also exhibit strong listing volumes.

### **Pricing Trends**

Average prices vary significantly by neighborhood group. Queen Anne (\$197.24) and Magnolia (\$192.36) command the highest average prices, suggesting a premium market in these areas. In contrast, University District (\$121.53) and Delridge (\$126.98) are among the most affordable neighborhood groups. At the individual neighborhood level, the "Industrial District" shows an anomalous fixed high price (\$400.00), while Laurelhurst (\$351.10) and View Ridge (\$289.92) represent high-end residential markets. "Hotel rooms" (\$481.00) are the most expensive room type, followed by "Entire home/apt" (\$180.41). Analysis of minimum nights reveals a weak negative correlation with price (-0.10). Average prices tend to increase for short multi-night stays (2-6 nights) compared to single nights but fluctuate and generally decrease for longer durations within a 30-night limit.

### **Availability**

Neighborhoods with high average availability include South Lake Union (270.22 days) and the Industrial District (269.50 days), potentially indicating a higher turnover or business-oriented stays. There isn't a strong consistent correlation between high availability and high or low prices, suggesting other factors are more influential in pricing.

### **Review Patterns**

Yesler Terrace (3.78), Belltown (3.51), and Pike-Market (3.46) show the highest average reviews per month, likely due to their central locations and tourist activity. In terms of total reviews, "Other neighborhoods" (111063), Downtown (78616), and Capitol Hill (54551) have the highest counts, aligning with their higher listing volumes. The top 5 most reviewed individual listings have exceptionally high review numbers (over 900), indicating significant popularity. Interestingly, the number of reviews does not show a strong linear relationship with the average price of a listing, suggesting price is driven by other factors beyond popularity as indicated by reviews.

### **Key Insights:**

- **Decentralized Market:** A significant portion of the Airbnb supply lies outside traditional neighborhood groups, highlighting the dispersed nature of the market.

- Price Sensitivity to Location and Accommodation Type: Location and the type of accommodation (entire home vs. private room vs. hotel room) are strong drivers of price.
- Complex Relationship with Stay Duration: Pricing strategies related to minimum nights are not strictly linear, with potential premiums for short multi-night stays and discounts for longer stays.
- Popularity Doesn't Dictate Price: Highly reviewed listings exist across various price points, indicating that factors beyond popularity primarily determine pricing.