Optimizing the New York Airbnb Market

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Agenda

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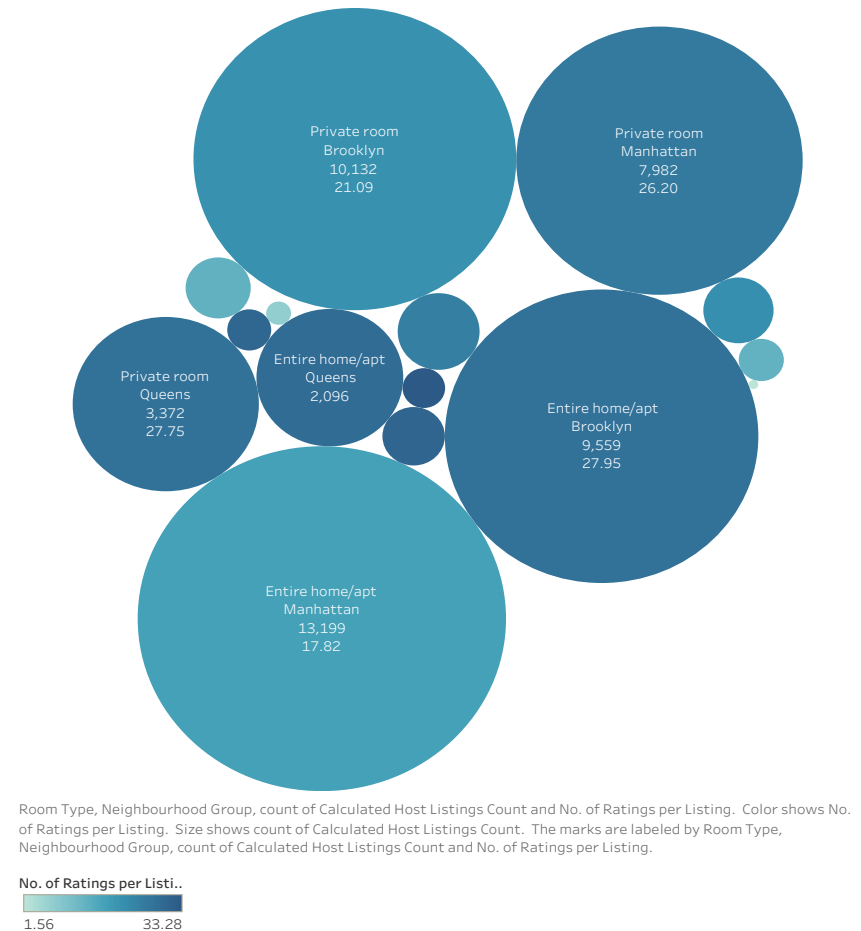 - Data Assumptions

Objective

- Gain deeper insights into the market conditions and how they have changed in the post-pandemic world.

- Gain a better understanding of our customers and their preferences to provide a personalized experience.

- Develop data-driven recommendations to various departments to help them prepare for the changes in the market and customer behavior in the post-pandemic world.

Background

- Pandemic caused significant revenue decline for Airbnb.
- COVID-19 restrictions are lifting, and people are starting to travel again.
- Airbnb needs to be fully prepared to meet changing customer needs and preferences.
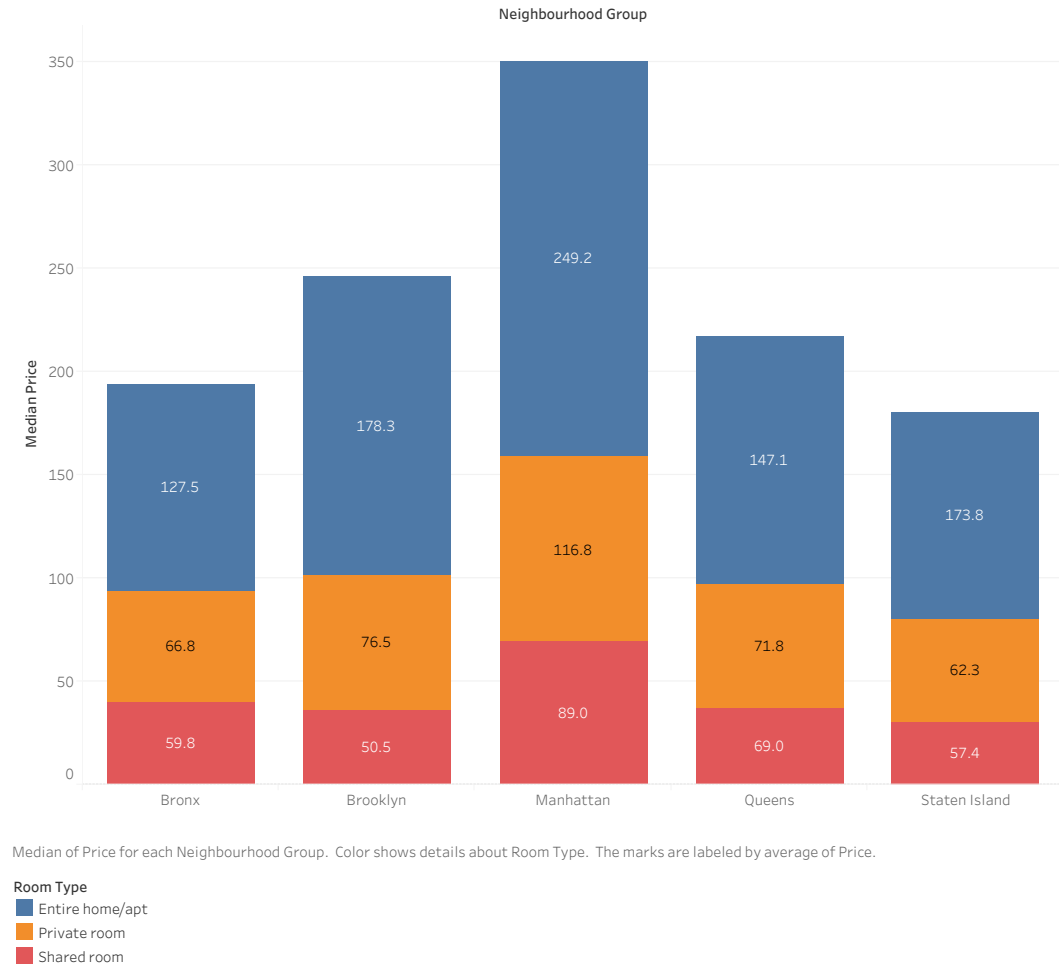
Neighborhood-Wise Business Distribution

- Private rooms are the most popular option in New York, with over 25 reviews per listing on average.

- The entire home/apartment listings in Manhattan receive an average of only 18 reviews per listing, 35% less than the city-wide average of 27.7, highlighting the need for optimization.

- Shared rooms underperform across all neighborhoods, with an average of only 7.3 reviews per listing, indicating the need for a better marketing strategy to improve their performance.

Private room
Brooklyn
10,132
21.09

Private room
Manhattan
7,982
26.20

Private room
Queens
3,372
27.75

Entire home/apt
Queens
2,096

Entire home/apt
Brooklyn
9,559
27.95

Entire home/apt
Manhattan
13,199
17.82

Room Type, Neighbourhood Group, count of Calculated Host Listings Count and No. of Ratings per Listing. Color shows No. of Ratings per Listing. Size shows count of Calculated Host Listings Count. The marks are labeled by Room Type, Neighbourhood Group, count of Calculated Host Listings Count and No. of Ratings per Listing.

No. of Ratings per Listi..

1.56   33.28

Pricing in Preferred Locations

- Entire homes/apartments are priced ~ 100% higher than private rooms, except in Brooklyn and Staten Island with ~ 150%

- Private rooms cost 10% more than shared rooms, except in Brooklyn and Manhattan with ~ 40%

- Manhattan is the most expensive area overall, with the Bronx having the cheapest entire homes/apartments, Staten Island having the cheapest private rooms, and Brooklyn having the cheapest shared rooms.

Neighbourhood Group

Median of Price for each Neighbourhood Group. Color shows details about Room Type. The marks are labeled by average of Price.

Room Type
- Entire home/apt
- Private room
- Shared room

Recommendations

- Focus on acquiring private rooms and entire apartments, particularly in popular areas like Staten Island.

- Adjust prices of entire apartments in Manhattan, lowering them by 15%, and increase the prices of private rooms in Queens by at least 10%.

- Feature properties with popular minimum night requirements for 1-5 days and 30 days at the top of the search results based on availability.

Appendix – Data Sources

- Here is a snapshot of our data dictionary
  - Host listing information, such as the host name, neighborhood, latitude, and longitude.
  - Customer preference information, including the number of reviews and the number of reviews per month.

Appendix – Data Methodology

- Our analysis of the New York Airbnb dataset involved extensive data wrangling using Python.

- We leveraged Tableau to analyze and visualize the data effectively to uncover insights.

- For a detailed understanding of our methodology, please refer to the accompanying document.

  - **Airbnb_casestudy_Methodology_Document.pdf**

Appendix – Data Assumptions

- Analyzed customer preferences using Reviews per Listing as a measure of popularity.

- Used the number of reviews as a baseline measure for identifying customer preferences.

- Assumed null values to have no significant impact on the analysis.

Thank You