

Impact of Customer Preferences on Airbnb revenue

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Agenda

- Objective
- Background
- Key findings
- Recommendations
- Appendix:
 - Data Sources
 - Data Methodology
 - Data Model Assumptions



Objective

- Improve our shared understanding on customer experience and preferences
- Improve our shared understanding on acquisition of best properties
- Provide recommendation to operation and user experience department head for the best property acquisition and improve user experience of the property



Background

- Airbnb has seen a major decline in revenue for the past few months due to pandemic
- Restrictions have started lifting
- People started to travel





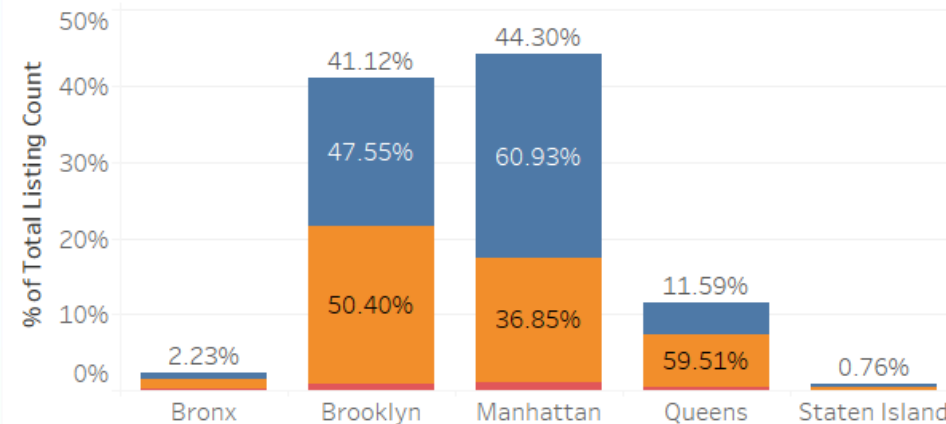
Listing distribution

- Manhattan is a neighborhood where maximum (~44%) listings are located and out of that ~61% listings are of Entire room/apt
- Staten Island and Bronx both neighborhood are observing very less listings
- There are almost ~52% listing of Entire home/apt room type and out of ~27% are from Manhattan and only ~2% listings are available for shared room

Room Type

■ Entire home/apt ■ Private room ■ Shared room

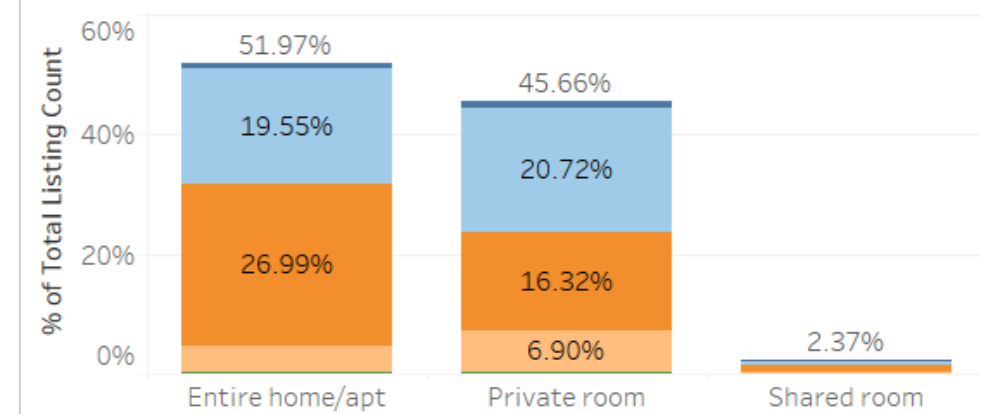
Listing by Neighbourhood per Room Type



Neighbourhood Group

■ Bronx ■ Manhattan ■ Staten Island
■ Brooklyn ■ Queens

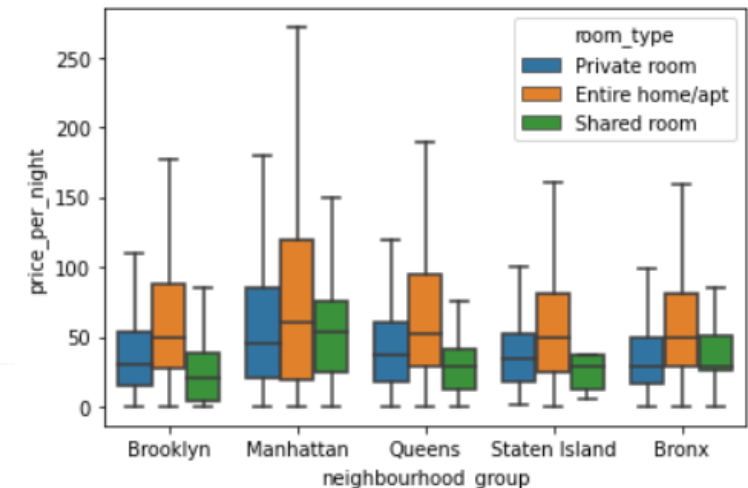
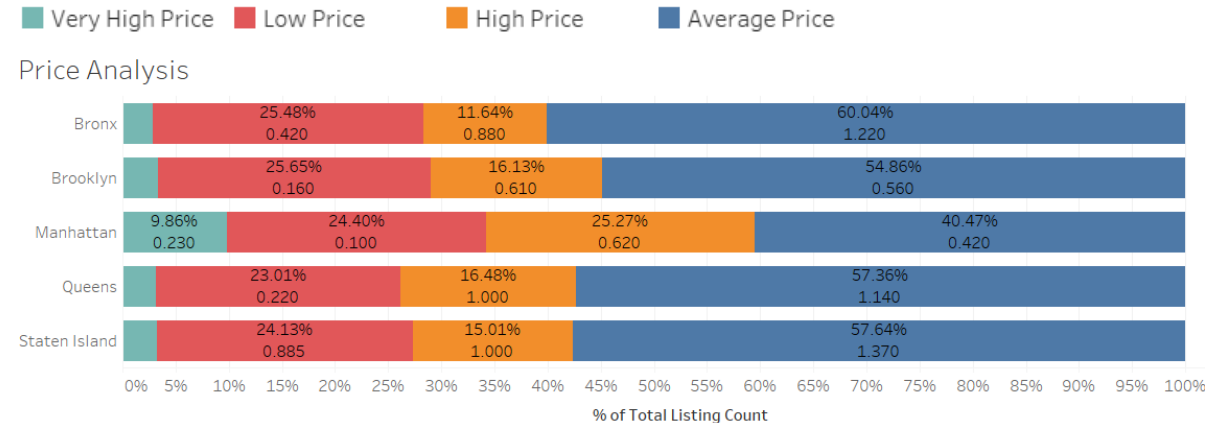
Listing by Room Type per Neighborhood





Price Analysis

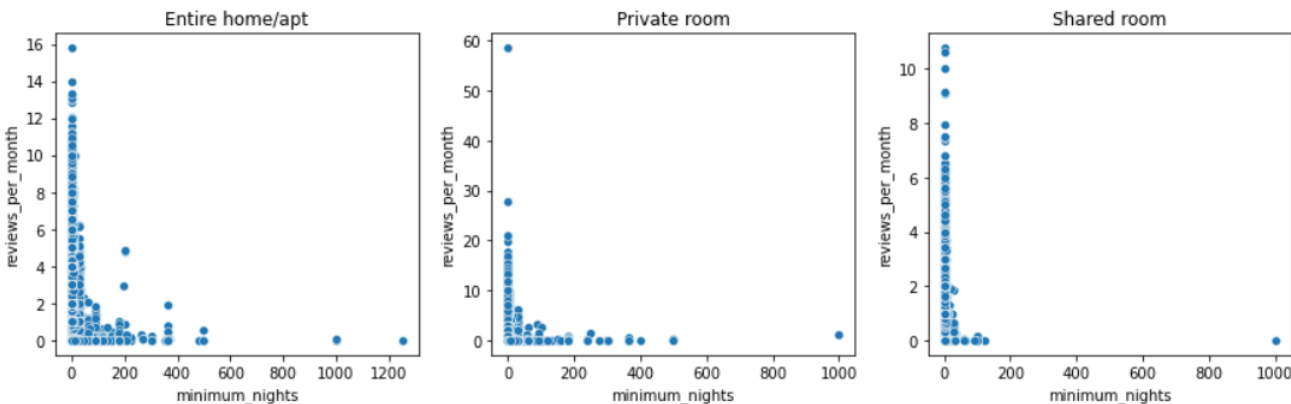
- Listings of low price (contributes ~25%) per month are not popular on the other hand listings offers average price (contributes >50%) across all neighborhood receives decent number of reviews
- Manhattan is the only neighborhood offers high price ranges per night across all room types
- Entire home/apt charges highest price ranges across all neighborhoods



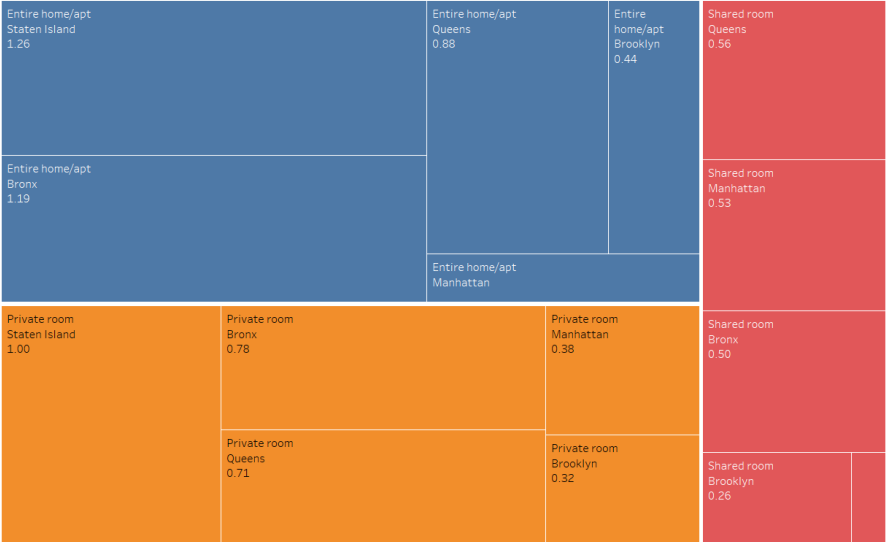
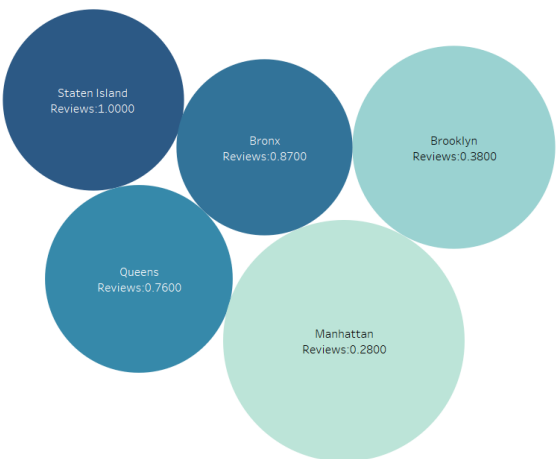


Customer preference analysis

- Customer is preferring listings that have minimum night stay across all room types.
- Customer prefers Staten Island and Bronx and they are mostly popular in Entire home/apt and Private room section over other geographies in NYC



Minimum Night Stay vs Reviews per Neighborhood





Recommendations

- Suggest hosts keeping night stay minimum for their listings or provide some discount on listing price for maximum night stay
- Acquire more listings in Staten Island and Bronx neighborhood by promoting hosts since they are popular compared to another neighborhood
- Listing price per night can be reduced in Manhattan neighborhood to get good customer review



Appendix

- Data sources
 - 2019 Airbnb listing data set from New York city
- Data dictionary
 - listing locations and its room type
 - Listing price, and its reviews
- Data Methodology
 - Data cleaned by dropping unnecessary features and imputing null values
 - Box-whisker plots used to detect outliers
 - New feature created such as price per night for price analysis across room type and neighborhood
 - Python used for data pre-processing and univariate and bivariate analysis
 - Tableau used for data visualization
- Data Assumptions
 - The reviews per listing assumed to be positive reviews to define listing popularity
 - The listing price is the total price for all minimum nights

Thank you

