



IIITB & UpGrad

Impact of Customer Preferences on Airbnb strategy

For Head of Acquisitions and Operations, NYC.

Head of User Experience, NYC.

Agenda

- Objective
- Background
- Key Findings
- Recommendations
- Appendix
 - Data Sources
 - Data Methodology
 - Data Assumptions

Objective

- Improve shared understanding of our customers - Hosts and Guests.
- Provide recommendations to Host Acquisition and Operations team.
- Provide recommendations to customer experience team.

Background

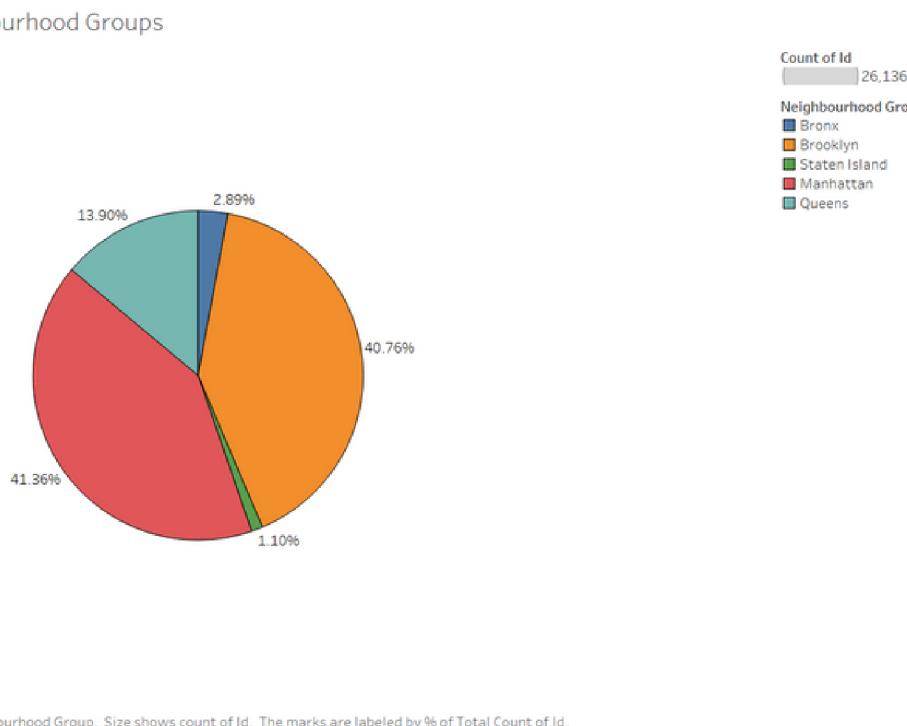
- The hospitality industry has significantly impacted by the COVID-19 pandemic.
- Governments around the world implemented strict lockdowns and travel restrictions, which resulted in a sharp decrease in travel demand and bookings.
- Due to which revenue of the Airbnb New York has declined significantly.

Key Findings

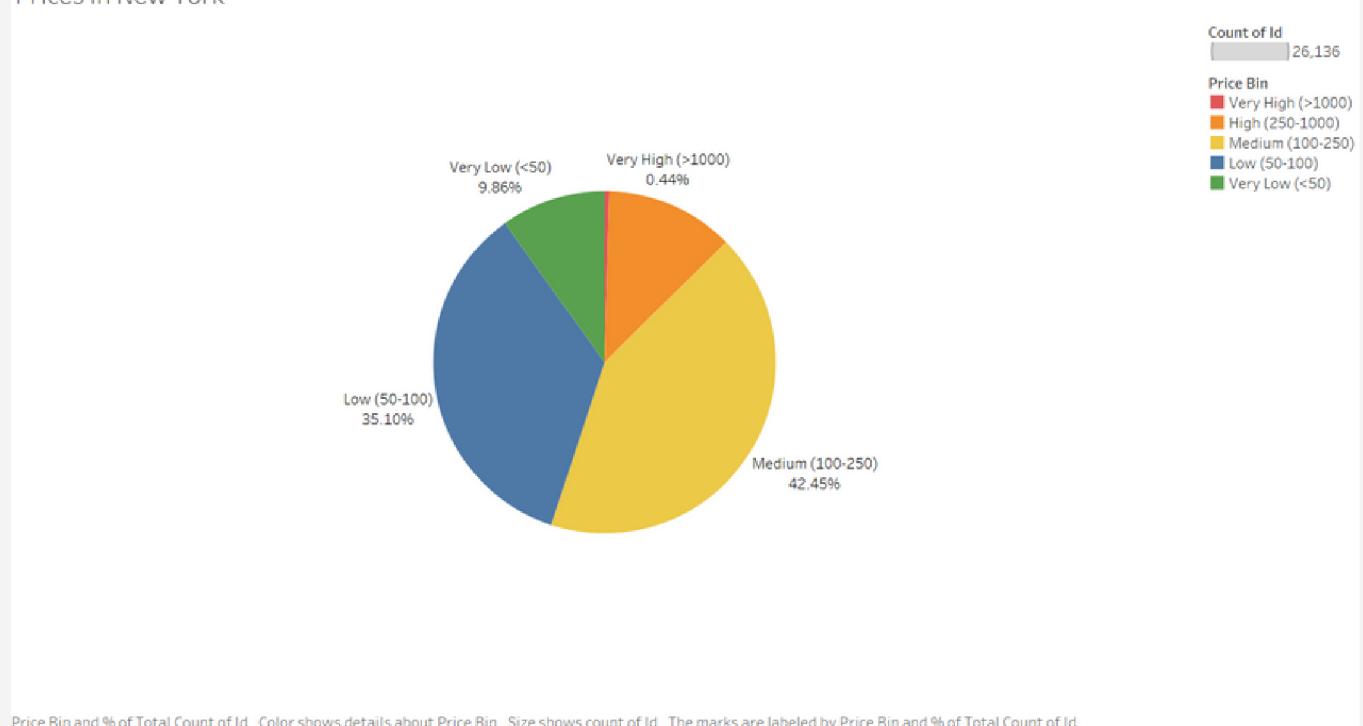
Host Analysis

- Around 97% of properties listed are in Manhattan, Brooklyn and Queens.
- Majority of the hosts avail their properties at price range of \$100-\$250.
- 3928 properties are inactive for 1-4 years.

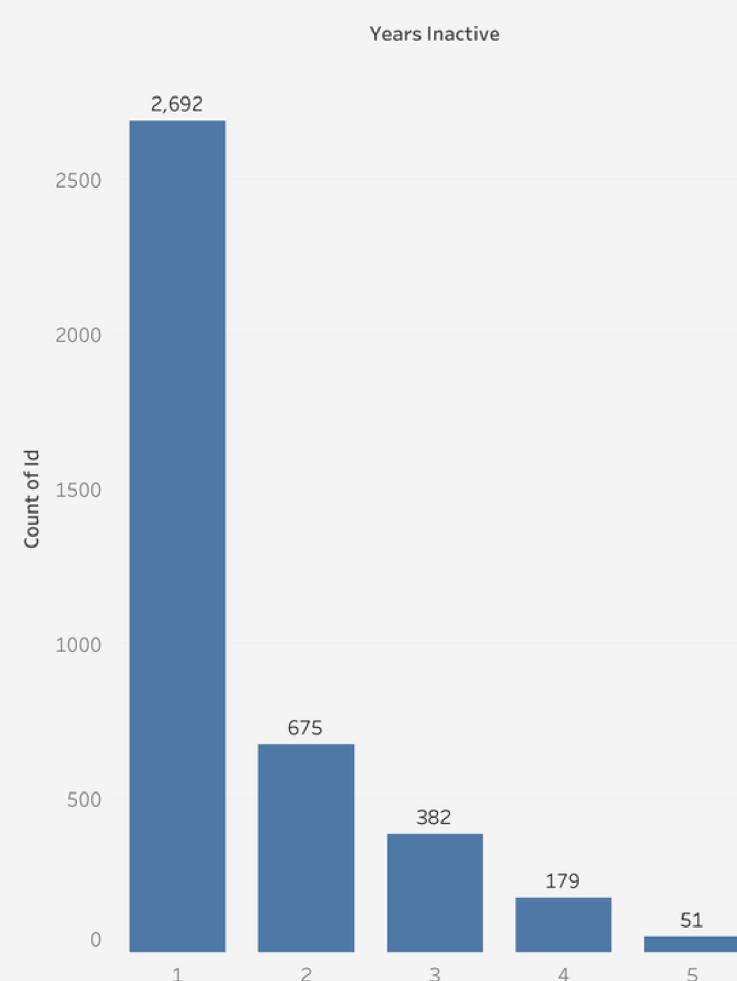
Percentage of Listings by Neighbourhood Groups



Prices in New York

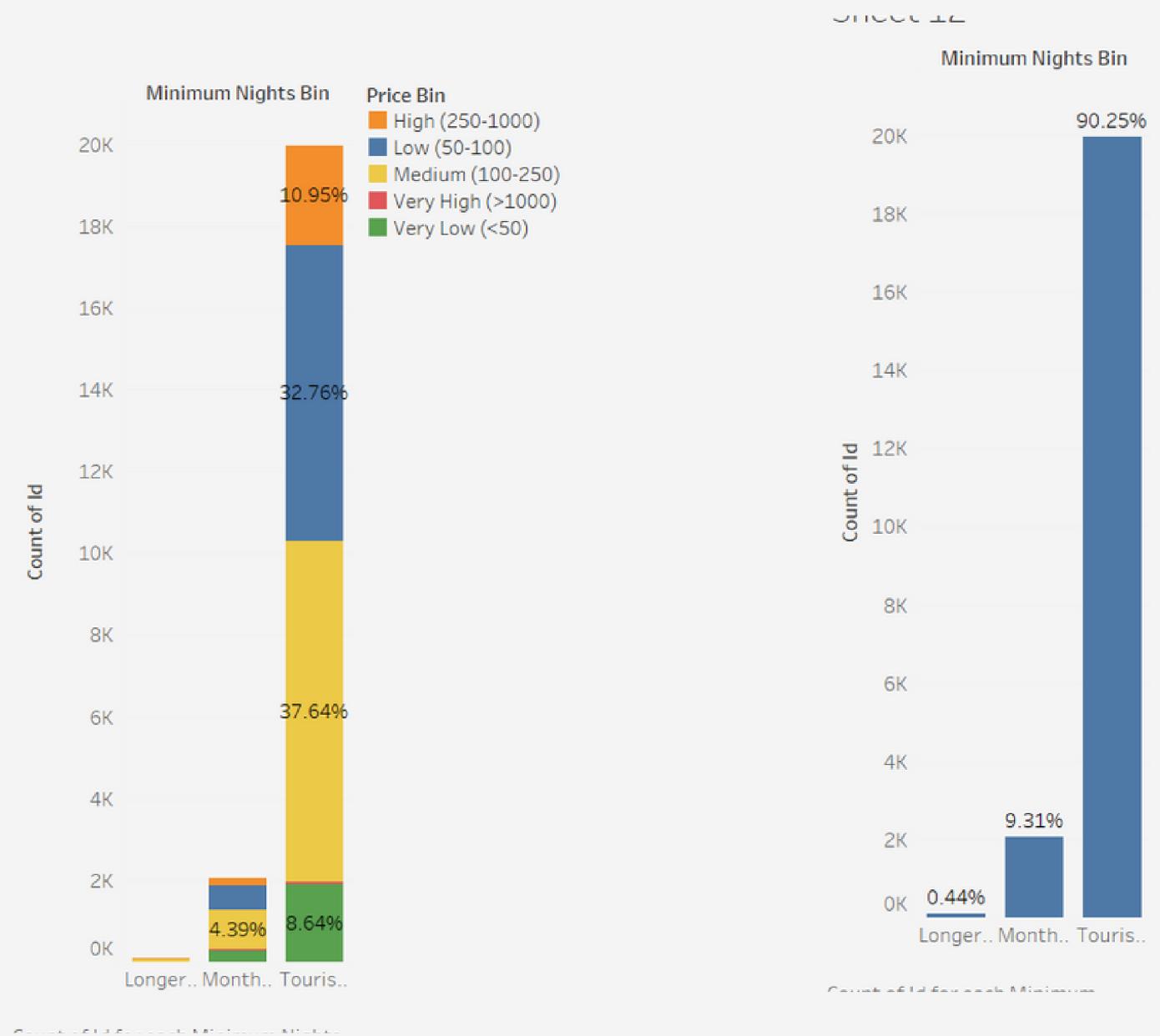


Inactive Properties

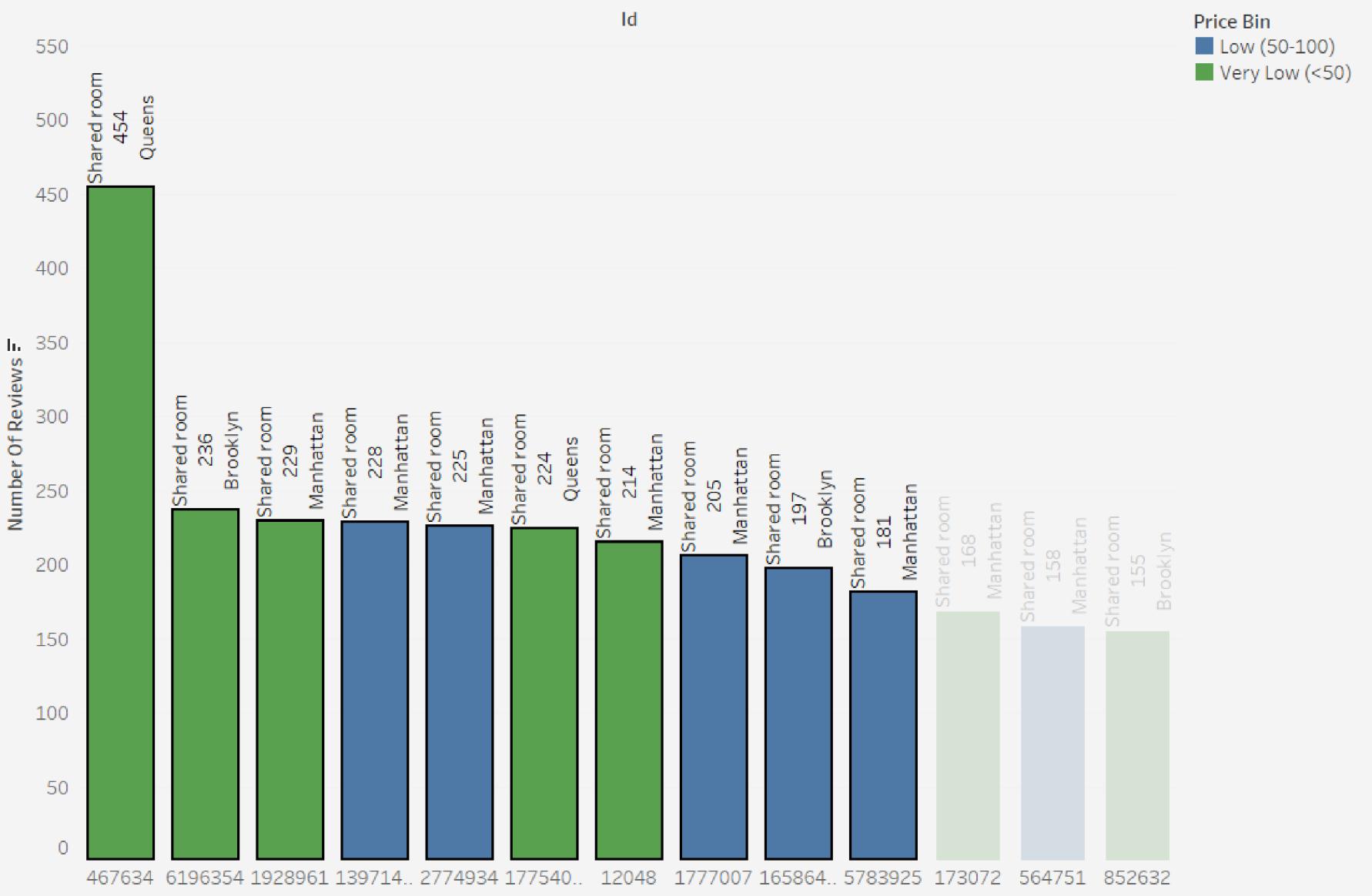


Making properties tourist friendly will improve traction

- 90.3% of the active properties were booked for **1-8 nights**.
- Price range preferred by customer is \$50-\$250 per night.
- The preferred room types are : Entire Home/Apartment and Private Room.



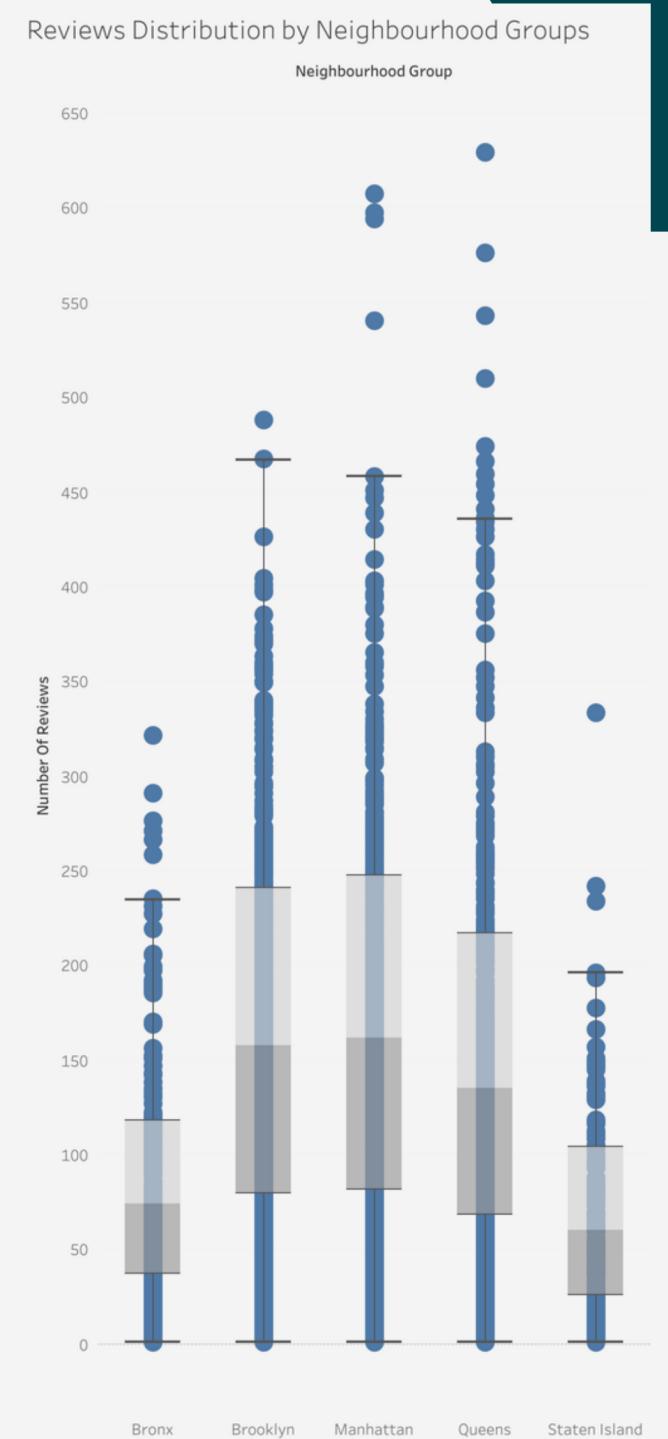
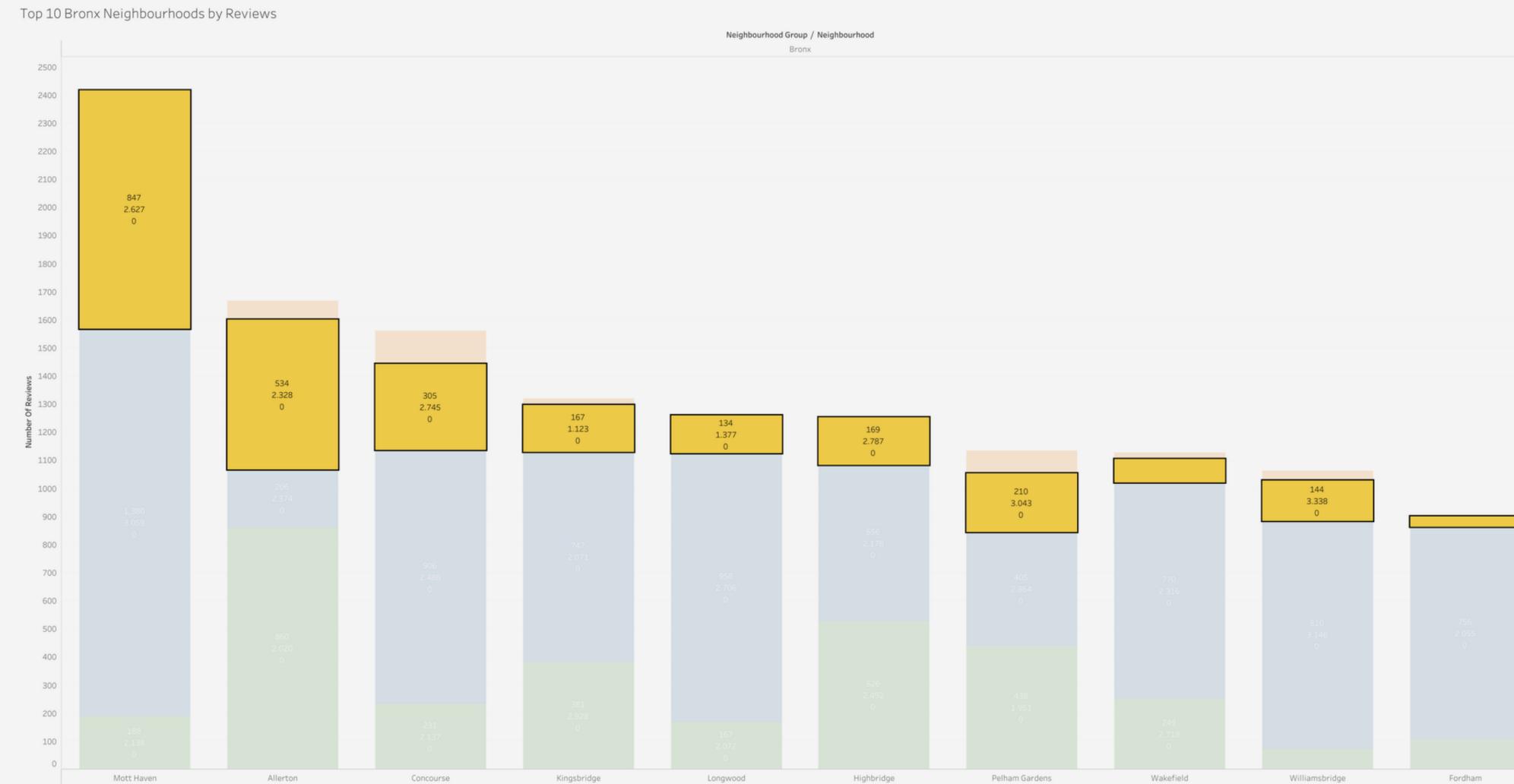
Providing shared rooms as private room in order to attract younger tourists



- Despite being 2.5% of total room types; shared rooms have received significantly **high number of reviews**.
- The price range preferred is less than \$100.
- Post pandemic guests might prefer to stay alone.

New Bronx properties can improve overall customer satisfaction

- Customers are willing to pay up to \$250 for Bronx listings.
- Bronx receives **decent amount of reviews**, considering it accounts for only **2.9%** of total listing counts.
- Bronx is fairly **close to Manhattan**, and most of the bookings are touristic (up to 8 days).



Recommendations

- Acquire and/or improve more properties nearby airports.
- Create mandatory covid-19 health and safety practices for hosts & guests.
- Provide easy access to health care professional in vicinity of properties.
- Make stays suitable for isolation and quarantine purpose for travelers.
- Restructure host policies in order to reactivate large chunk of properties on the portal.

Appendix

Data Sources

- The data used in the analysis was provided by Airbnb.
- The data contained 16 columns and 48,896 rows.

| Column | Description |
|--------------------------------|--|
| id | listing ID |
| name | name of the listing |
| host_id | host ID |
| host_name | name of the host |
| neighbourhood_group | location |
| neighbourhood | area |
| latitude | latitude coordinates |
| longitude | longitude coordinates |
| room_type | listing space type |
| price | |
| minimum_nights | amount of nights minimum |
| number_of_reviews | number of reviews |
| last_review | latest review |
| reviews_per_month | number of reviews per month |
| calculated_host_listings_count | amount of listing per host |
| availability_365 | number of days when listing is available for booking |

Categorical Variables:

- room_type
- neighbourhood_group
- neighbourhood

Continuous Variables(Numerical):

- Price
- minimum_nights
- number_of_reviews
- reviews_per_month
- calculated_host_listings_count
- availability_365

- Continuous Variables could be binned in to groups too

Location Variables:

- latitude
- longitude

Time Variable:

- last_review

Data Methodology

Data cleaning steps:

- Removed rows with values such as “Not available”, “No longer available”, etc. in [name].
- Removed rows with [price] of 0, 9999, 10000.
- Removed rows with [minimum_nights] more than 365.
- Removed rows with [availability_365] of 0 or more than 365.
- Removed rows with [number_of_reviews] of 0 (considering them inactive).
- Brought [last_review] to one format (mm/dd/yyyy).
- Data visualisations included in presentation are made using Tableau.

Data Assumptions

- New columns were derived based on the assumptions made:
 - [years_inactive] assuming [last_review] the day of the last booking made in a listing
 - [price_bin] in order to categorize [price]:
 - Very Low (< \$50)
 - Low (\$50-\$100)
 - Medium (\$100-\$250)
 - High (\$250-\$1000)
 - Very High (> \$1000)
- [minimum_nights_bin] in order to categorize customers by the length of their stay:
- Touristic Booking (1-8 nights) assuming that only tourists will stay in a property for such a short time.
- Monthly Rent (9-31 nights) assuming that people stay in such properties for living in New York short term.
- Longer Stay (32-365 nights) assuming that people rent such properties for living in New York.