

PROBLEM STATEMENT

Pillow Palooza is a real estate start-up focused on disrupting the traditional real estate market by offering short-term rental options for travellers.

The company has seen a significant increase in demand for short-term rentals in New York City but wants to better understand the market to optimize their business strategy.

The analysis will aim to uncover key trends in popular neighbourhoods, rental prices, property types, length of stay, and demand over time.

The insights will identify which neighbourhoods to invest in, which property types to focus on, and how to price their rentals to remain competitive in the market.



DATA DESCRIPTION

- **Airbnb_price.csv**

Listing_id: Unique identifier of listing

Price: Nightly listing price in USD

Neighbourhood name : Name of borough and neighbourhood where listing is located

- **Airbnb_room_type.xlsx**

This is an Excel file containing data on Airbnb listing descriptions and room types.

Listing_id: Unique identifier of listing

Description: Listing description

Room type: Airbnb has three types of rooms: shared rooms, private rooms, and entire homes/apartments

- **Airbnb_last_review.tsv**

This is a TSV file containing data on Airbnb host names and review dates.

CHARTS AND VISUALIZATIONS



A total of six charts were created, grouped into a dashboard.



1. Listing map: A mapbox was used to show the number of listings per borough within New York City.



2. Length of stay per neighbourhood: A bar chart showing median minimum nights and median bookings per neighbourhood.



3. Revenue generated: A bar chart showing the total revenue generated and the total listing counts for each room type per borough.

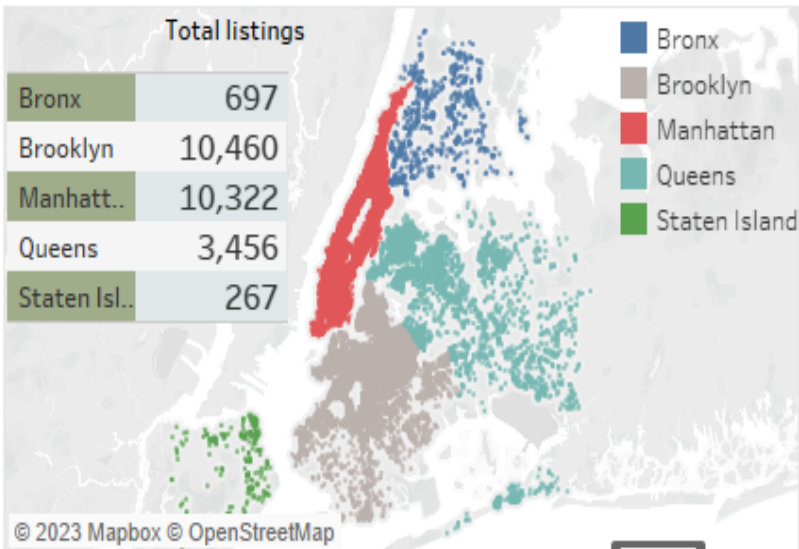


4. The monthly bookings and availability by borough

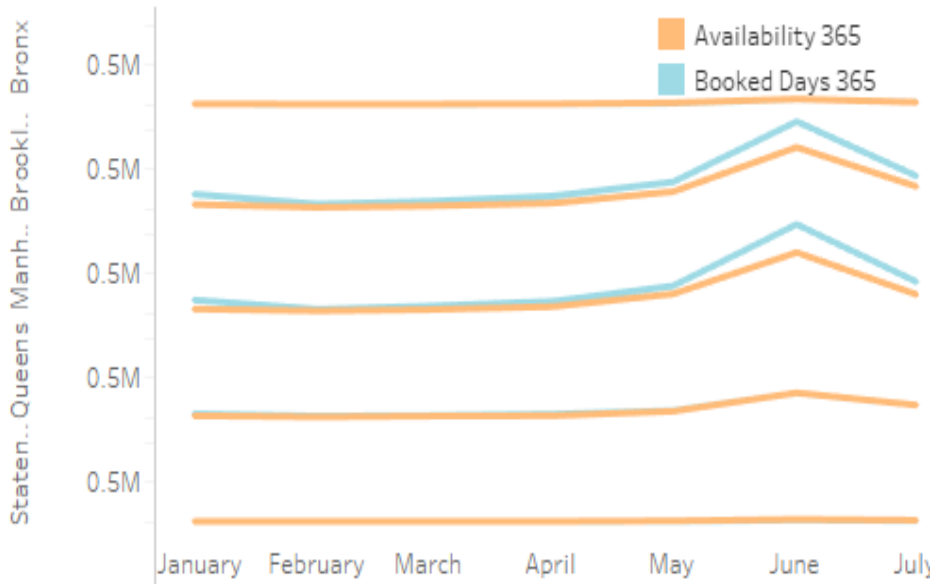
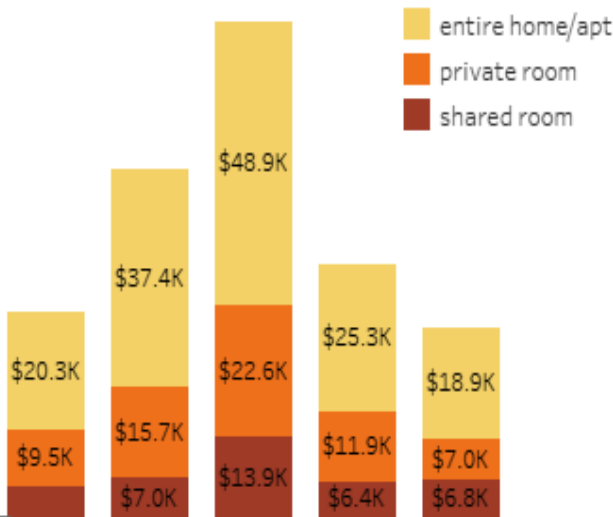


5. Most Booked Neighbourhoods: A horizontal bar chart was used to show the occupancy rate by using stacked bar to show the availability 365, booked days, and listings for each neighbourhood grouped by borough.

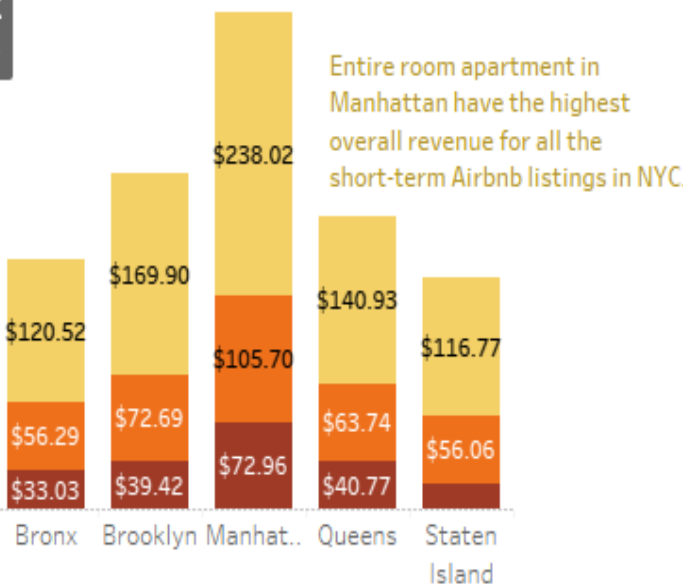
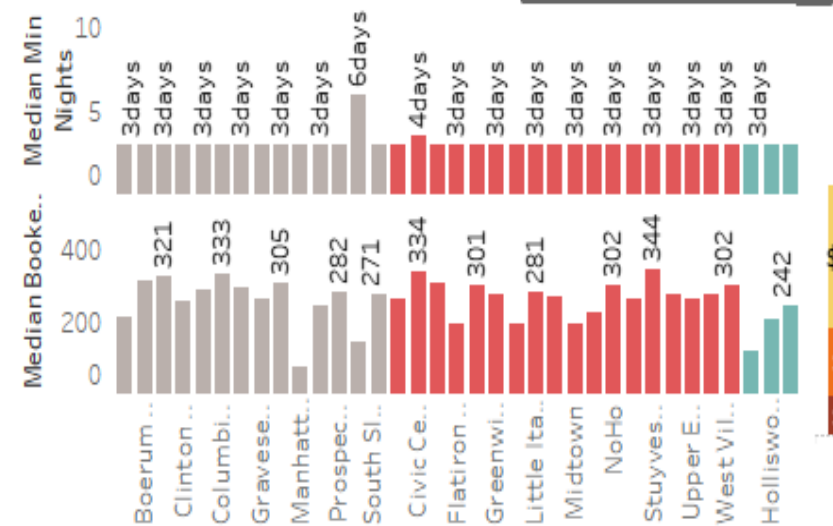
Analysis of New York City Airbnb Listings



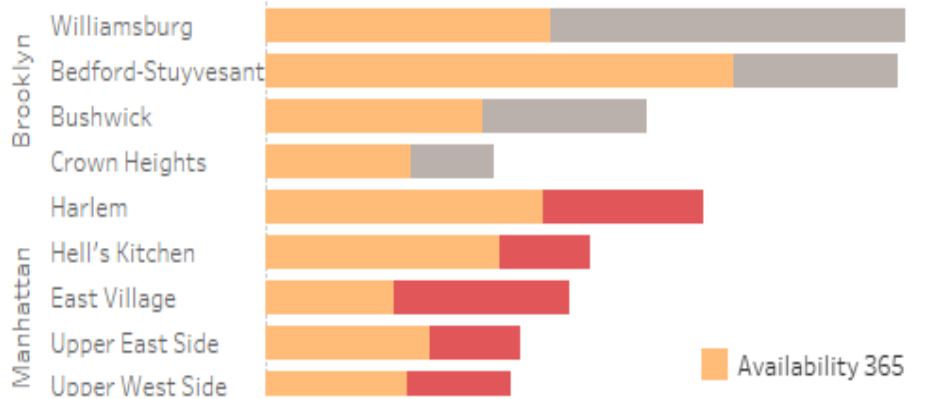
Average revenue per room type



Length of stay per neighbourhood



Most booked neighbourhoods



Neighbourhoods with higher occupancy rate are located in Brooklyn and Manhattan. The bar shows the availability 365, total bookings and total listings for the top 10 neighbourhoods.

INSIGHTS



There is a higher concentration of listings in Brooklyn and Manhattan compared to other boroughs. Both boroughs have over 80% of all the listings in New York City (Brooklyn - 41.5%, Manhattan - 41%).



Entire room apartment in Manhattan have the highest overall revenue for all the short-term Airbnb listings in NYC. Also, for every Borough entire room recorded higher returns than other room types.



Entire room type in Manhattan is the most expensive room followed by Brooklyn, Queens, Bronx and then Staten Island.



Sea gate in Brooklyn and civic centre in Manhattan are the neighbourhoods with the most length of stay. Half of all bookings in sea gate neighbourhood stayed for at least 6 nights while civic centre was about 4 nights.



There is surge in bookings in the month of June, with Manhattan and Brooklyn recording higher bookings than available rooms.



Williamsburg, Bedford-Stuyvesant and Harlem are the most booked neighbourhoods with the first two located in Brooklyn while the third in Manhattan.

RECOMMENDATIONS

1. Following the huge concentration of listings, bookings and revenue in Brooklyn and Manhattan, I would recommend that the business should focus growth on both boroughs.

2. The neighbourhoods with higher occupancy rate should also be considered, these are

Williamsburg, Bedford-Stuyvesant, and Harlem all located in the two busiest boroughs.

3. More investment should be channelled towards entire rooms apartment due to the high booking rate and higher revenue compared to other room types.

4. More room availability should be ensured in the peak period of June to maximize occupancy potentials.