

Pillow Palooza Short-Term Rental Market Analysis

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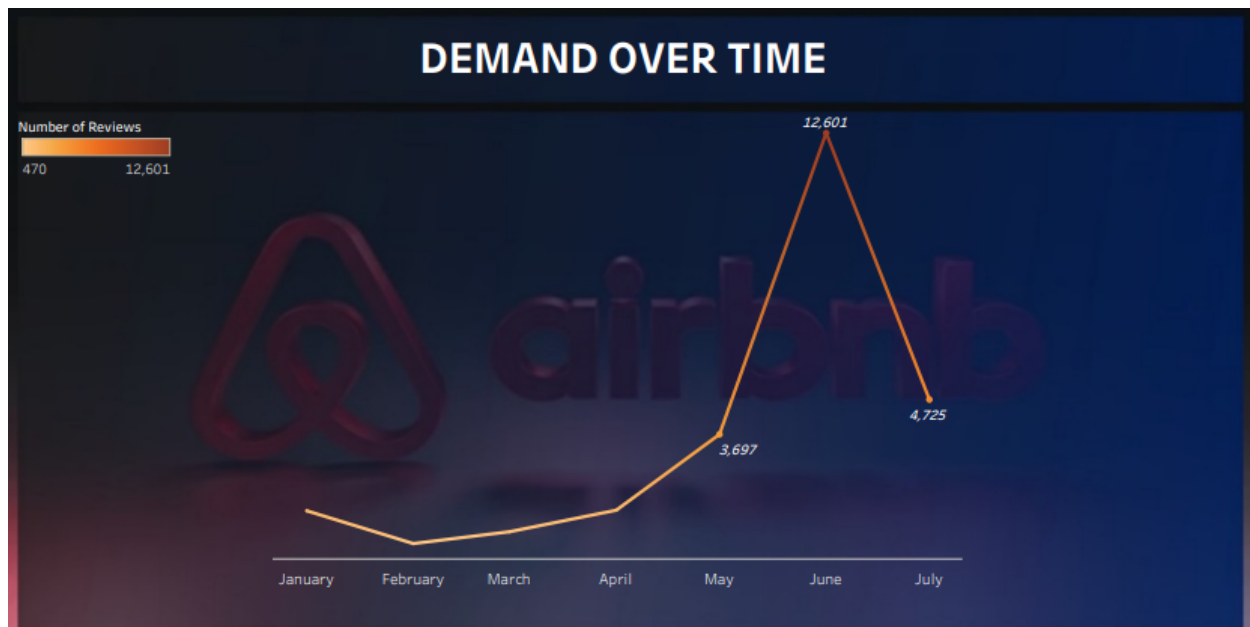
Executive Summary:

I conducted an analysis of New York City short-term rentals to uncover the most demanded property type, the most popular neighbourhood, the revenue generation potentials of each borough, the most profitable property types among others. This analysis aims at providing insight and recommendations to help our company make informed business decisions in the short-term rental business.

I collected Airbnb listing data from multiple sources because we have no direct access to the full Airbnb listing data. I took them through thorough cleaning so as to have insights that are as accurate as possible.

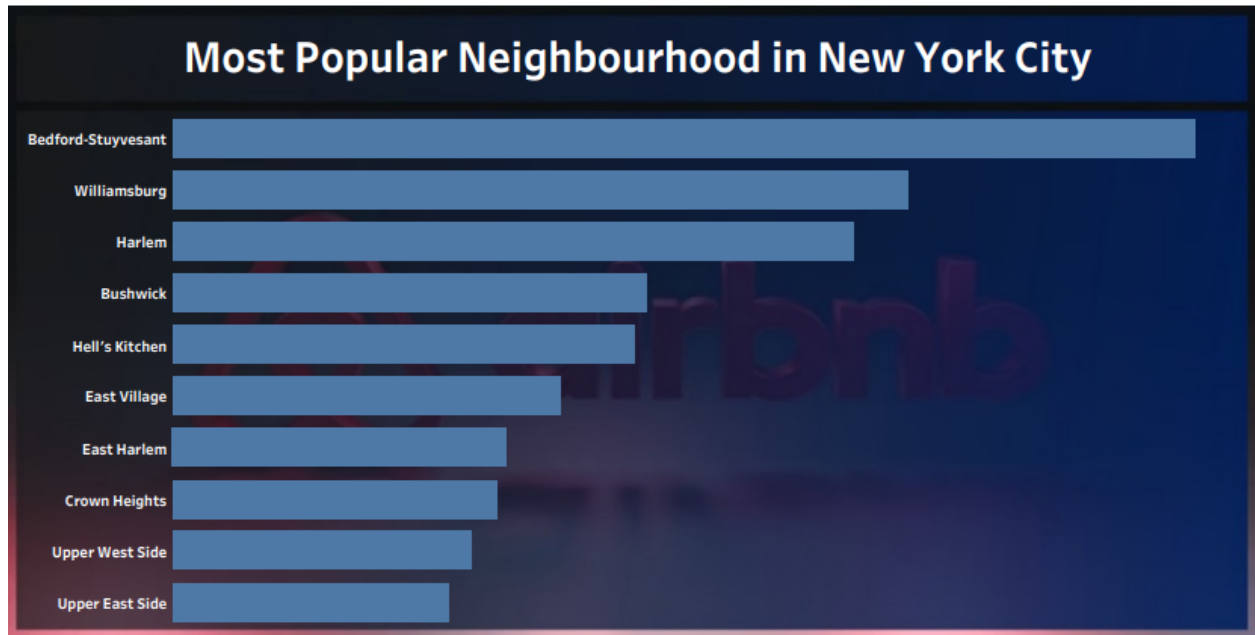
Demand over time

A sharp rise in demand was noted between the months of May (3,697) and June(12,601) and a sharp decline in July(4,725). This could be a pointer to seasonal trends, probably due to the influx of summer travelers, however, we cannot explicitly provide answers with certainty to the question of demands over time due to the fact that we are handicapped by limited availability of data. There is no data available going forward from the month of August.



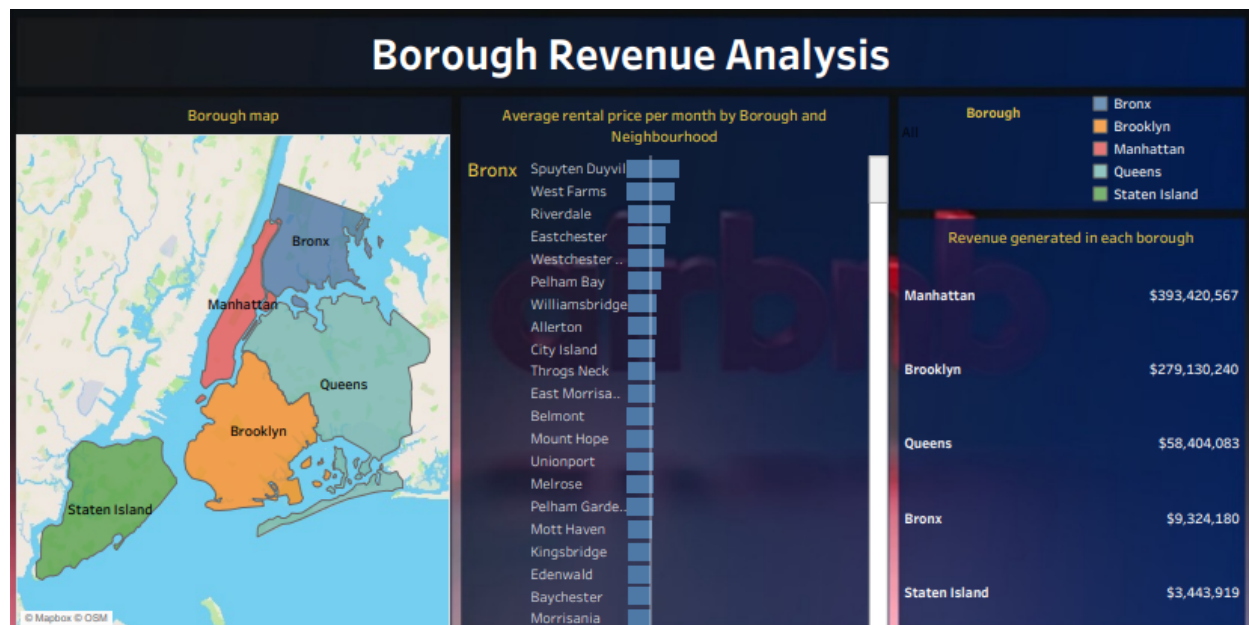
Most Popular Neighbourhood

The top 3 most popular neighbourhoods are Bedford-Stuyvesant in Brooklyn, Williamsburg in Brooklyn and Harlem in Manhattan.



Borough Revenue generation analysis

Manhattan has the highest average price of short-term rentals of \$6,022 and in turn generated the highest revenue of \$393M. Close to it is Brooklyn with average price of \$4,218 and \$279M generated in revenue. Queens, Bronx and Staten Island generated very low revenue compared to Manhattan and Brooklyn.

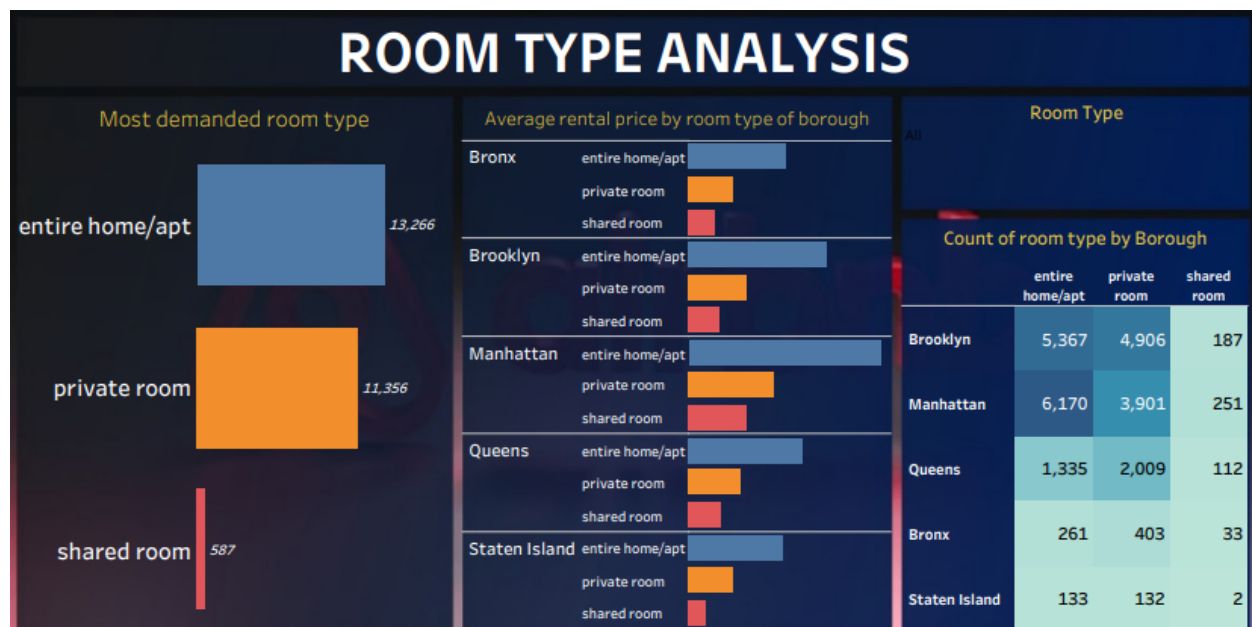


Room Type Analysis

Generally, the most demanded room type is the entire home/apt followed by private rooms while the shared rooms are the least demanded. This could also be attributed to the whole family traveling for summer.

Entire home/apartment room type has the highest average price in all the five Boroughs and that is followed by private rooms.

Our analysis also revealed that the highest number of entire home/apartment room types and shared rooms are in Manhattan with 6,170 and 251 respectively, while Brooklyn has the highest number of private rooms(4,906).



Recommendation

As a rental start-up, and base on the revelation of our analysis, the following are our recommendations:

- ❖ **Revenue generation potential:** **Manhattan** and **Brooklyn** have the highest revenue potentials than the other three boroughs and the top three **most popular neighbourhoods** are located in Manhattan and Brooklyn. The most expensive Borough being Manhattan, with the highest average price per month . We therefore recommend that the company penetrate Manhattan and Brooklyn markets.

- ❖ **Property Type:** Entire home/apartment and private rooms are more demanded by guests than the shared room, therefore, we recommend that more resources be channeled into the more in-demand property types.

Appendix

- ❖ Link to video presentation: [pillow_palooza_olugbenga](#)
- ❖ Link to Tableau story: [palooza_interactive_dashboard_olugbenga](#)

Codes

- ❖ **Number of property types per Borough**

```
SELECT DISTINCT(p.borough) borough,  
  
               r.room_type rooms,  
  
               COUNT(r.room_type) num_room_type  
  
FROM prices p  
  
JOIN room_types r  
  
ON p.listing_id = r.listing_id  
  
GROUP BY 1, 2  
  
ORDER BY 2, 3 DESC
```

- ❖ **Average rental price per month in Boroughs and Neighbourhoods**

```
SELECT borough,  
  
       neighbourhood,  
  
       ROUND(AVG(price_per_month)::numeric, 2) avg_rental_price  
  
FROM prices  
  
GROUP BY 1, 2  
  
ORDER BY 3 DESC;
```

❖ **Revenue generated per Borough**

```
SELECT p.borough,  
       SUM(r.booked_days_365 * p.price) total_revenue  
  
FROM prices p  
  
JOIN reviews r  
  
ON p.listing_id = r.listing_id  
  
GROUP BY 1  
  
ORDER BY 2 DESC;
```

❖ **Most demanded room type**

```
SELECT room_type, COUNT(*)  
  
FROM room_types  
  
GROUP BY 1  
  
ORDER BY 2 DESC;
```