NYC Short-term Rental Insights from Airbnb Data

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Summary

My recommendation is to prioritize the entire home/apartment property type, as it has the potential to generate the highest revenue. Specifically, I recommend focusing on Williamsburg, Brooklyn as it is the top revenue-generating location. To maximize our earnings, I propose setting our price per night to at least $179 for these properties. This pricing strategy, coupled with the desirable location, can help optimize our revenue in the short-term rental market.

Context

Our analysis of Airbnb data aimed to extract valuable insights regarding the short-term rental market in New York City, to identify opportunities for growth and success. The dataset included a total of 25,209 listings, categorized into three types of properties: entire home/apartment, private room, and shared room. These listings spanned 216 neighbourhoods within the five boroughs of New York City. We excluded seven rows that contained null values. The focus of our analysis revolved around examining each of the three room types individually.
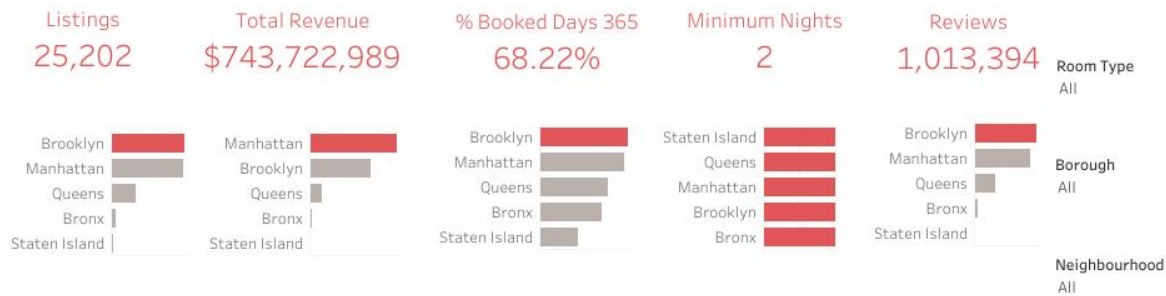
Results

All 25202 listings are estimated to generate a total revenue reaching $734,722,989 with a median booking rate of 68.22% for the next 365 days and a median booking of a minimum of 2 nights. All listings received a total of 1,013,394 reviews.
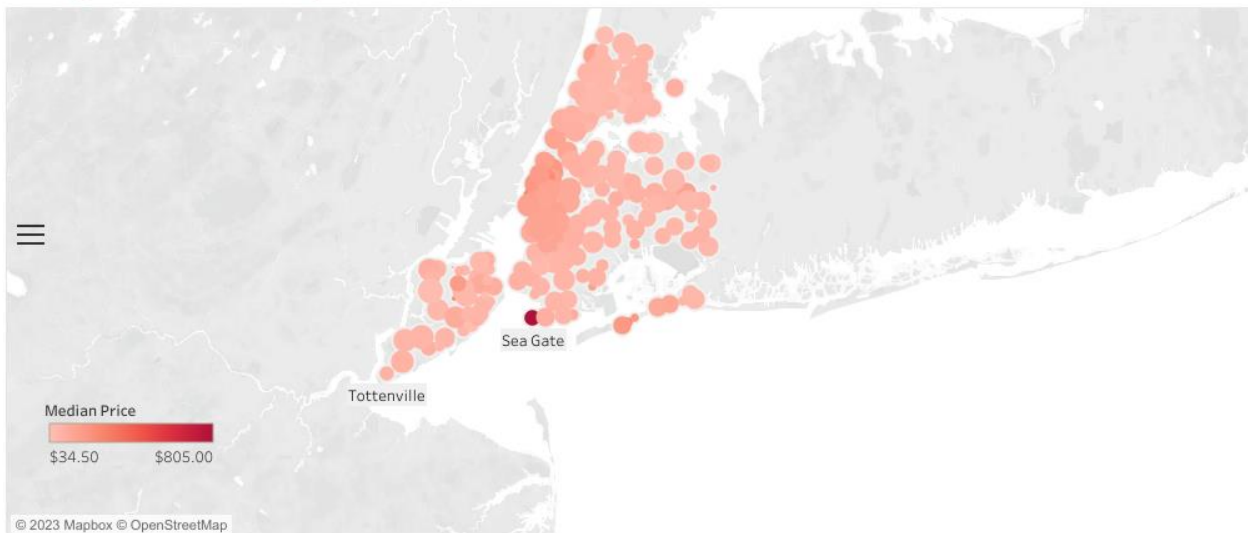
Among the five boroughs, Brooklyn had the highest number of listings, with 10,460 properties and is estimated to generate the second highest revenue reaching $279,130,140. Following closely behind, Manhattan had 10,322 listings and is projected to generate the most revenue amounting to $393,420,567. However, when it came to popularity, Brooklyn had the highest median booking rate of 74.11%, surpassing Manhattan's booking rate of 70.41%.

The neighbourhood with the highest overall estimated total revenue is Williamsburg, in the Brooklyn Borough ($65,364,074) with a median booking rate of 81.9% and a median nightly rate of $120.

Airbnb Short-term Rentals in New York City

Listings	Total Revenue	% Booked Days 365	Minimum Nights	Reviews
25,202	$743,722,989	68.22%	2	1,013,394

Room Type
All

Borough
All

Neighbourhood
All

Booking rate for the next 365 days and current prices

Median Price
$34.50 $805.00

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Entire home/apartment: Of all the types of short-term rentals available, entire homes/apartments were the most commonly offered and the second most frequently booked. There were 13,266 listings, with a median booking rate of 68.22% for the next 365 days and a median booking of a minimum of 3 nights. These rentals are projected to generate the highest estimated revenue of $543,790,921 over the next year. Additionally, they received the highest number of reviews, totalling 518,674.
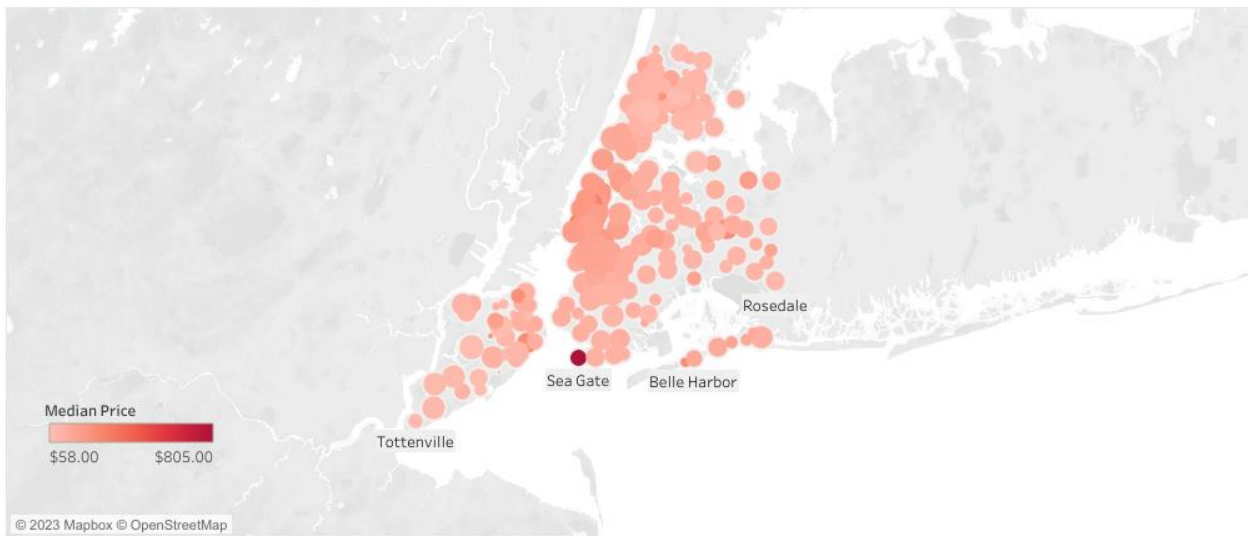
Manhattan had the highest number of listings, with 6,170 properties available. It is also estimated to generate the most revenue, reaching $301,648,489. Next to it, Brooklyn had 5,367 listings and is projected to generate $200,577,295 in revenue. However, in terms of popularity, Brooklyn had the highest median booking rate of 73.97%, while Manhattan's booking rate was 68.22%.

In Manhattan, Hell's Kitchen is estimated to generate the highest revenue amounting to $33,015,570 with a median booking rate of 65.8% and a median nightly rate of $200 while in Brooklyn, Williamsburg is estimated to generate the highest revenue reaching $47,167,259 with a median booking rate of 79.6% and a median nightly rate of $179.

Airbnb Short-term Rentals in New York City

Listings	Total Revenue	% Booked Days 365	Minimum Nights	Reviews
13,266	$543,790,921	68.22%	3	518,674

Room Type
entire home/apt

Listings
- Manhattan
- Brooklyn
- Queens
- Bronx
- Staten Island

Total Revenue
- Manhattan
- Brooklyn
- Queens
- Bronx
- Staten Island

% Booked Days 365
- Brooklyn
- Manhattan
- Queens
- Bronx
- Staten Island

Minimum Nights
- Manhattan
- Brooklyn
- Staten Island
- Queens
- Bronx

Reviews
- Brooklyn
- Manhattan
- Queens
- Bronx
- Staten Island

Borough
All

Neighbourhood
All

Booking rate for the next 365 days and current prices

Median Price
$58.00 — $805.00

Rosedale · Sea Gate · Belle Harbor · Tottenville
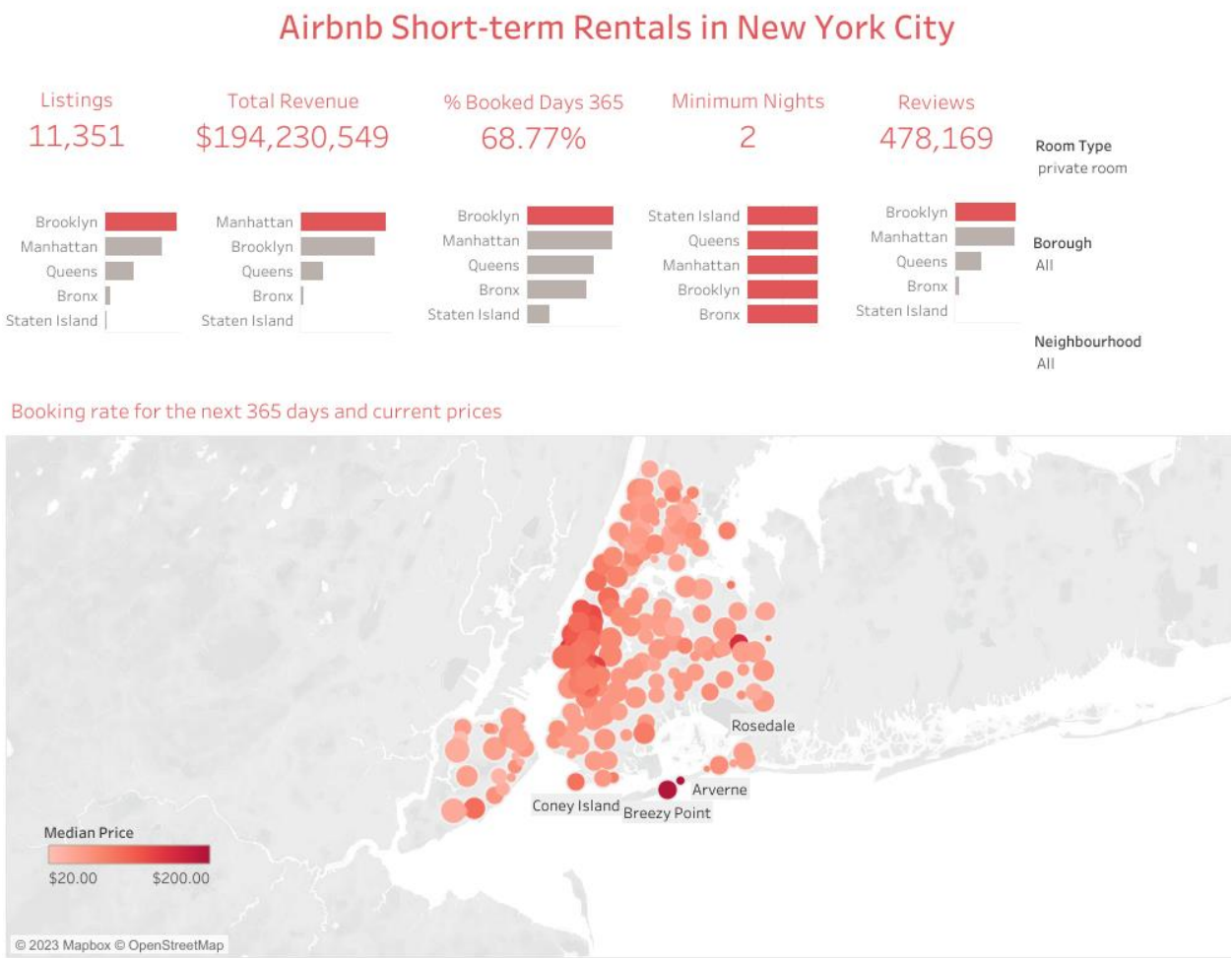
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Private room: Private rooms were the second most commonly offered but the most frequently booked type of short-term rental. There were 11,351 listings for private rooms, with a median booking rate of 68.77% for the next 365 days and a median booking of a minimum of 2 nights. These rentals are projected to generate the second-highest estimated revenue of $194,230,549 over the next year. They also received the second-highest number of reviews, totalling 478,169.

Brooklyn had the highest number of private room listings, with 4,906 properties. It is estimated to generate the second-highest revenue, reaching $77,250,922. On the other hand, Manhattan had the second-highest number of private room listings, with 3,901 properties, but it is projected to generate the most revenue, amounting to $88,289,888. However, by popularity, Brooklyn had the highest median booking rate of 74.52%, surpassing Manhattan's booking rate of 73.42%.

In Manhattan, Harlem is estimated to generate the highest revenue amounting to $13,810,050. It has a median booking rate of 67.9% and a median nightly rate of $70. In Brooklyn,

Williamsburg is estimated to generate the highest revenue reaching $18,006,028 with a median booking rate of 84.1% and a median nightly rate of $75.

Airbnb Short-term Rentals in New York City

Listings	Total Revenue	% Booked Days 365	Minimum Nights	Reviews
11,351	$194,230,549	68.77%	2	478,169

Room Type
private room

Borough
All

Neighbourhood
All

Booking rate for the next 365 days and current prices

Median Price
$20.00 $200.00

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Shared room: Shared rooms were the least commonly offered and least booked type of short-term rentals. There were only 585 listings for shared rooms, with a median booking rate of 52.88% for the next 365 days and a median booking of a minimum of 1 night. These rentals are projected to generate the least revenue of $5,701,519 over the next year. Additionally, they received the fewest number of reviews, totalling 16,551.

Manhattan had the highest number of shared room listings, with 251 properties available and is also estimated to generate the highest revenue, amounting to $3,482,190. Following second, Brooklyn had 187 shared room listings and is projected to generate $1,302,023 in revenue. However, in terms of popularity, Staten Island had the highest median booking rate of 89.59%, followed by Brooklyn with a booking rate of 63.01%.

In Manhattan, Hell's Kitchen is also estimated to generate the highest revenue, reaching $836,714 with a median booking rate of 38.4% and a median nightly rate of $75. In Brooklyn, Bedford–Stuyvesant is estimated to generate the highest revenue, amounting to $288,201 with a median booking rate of 30.7% and a median nightly rate of $35.
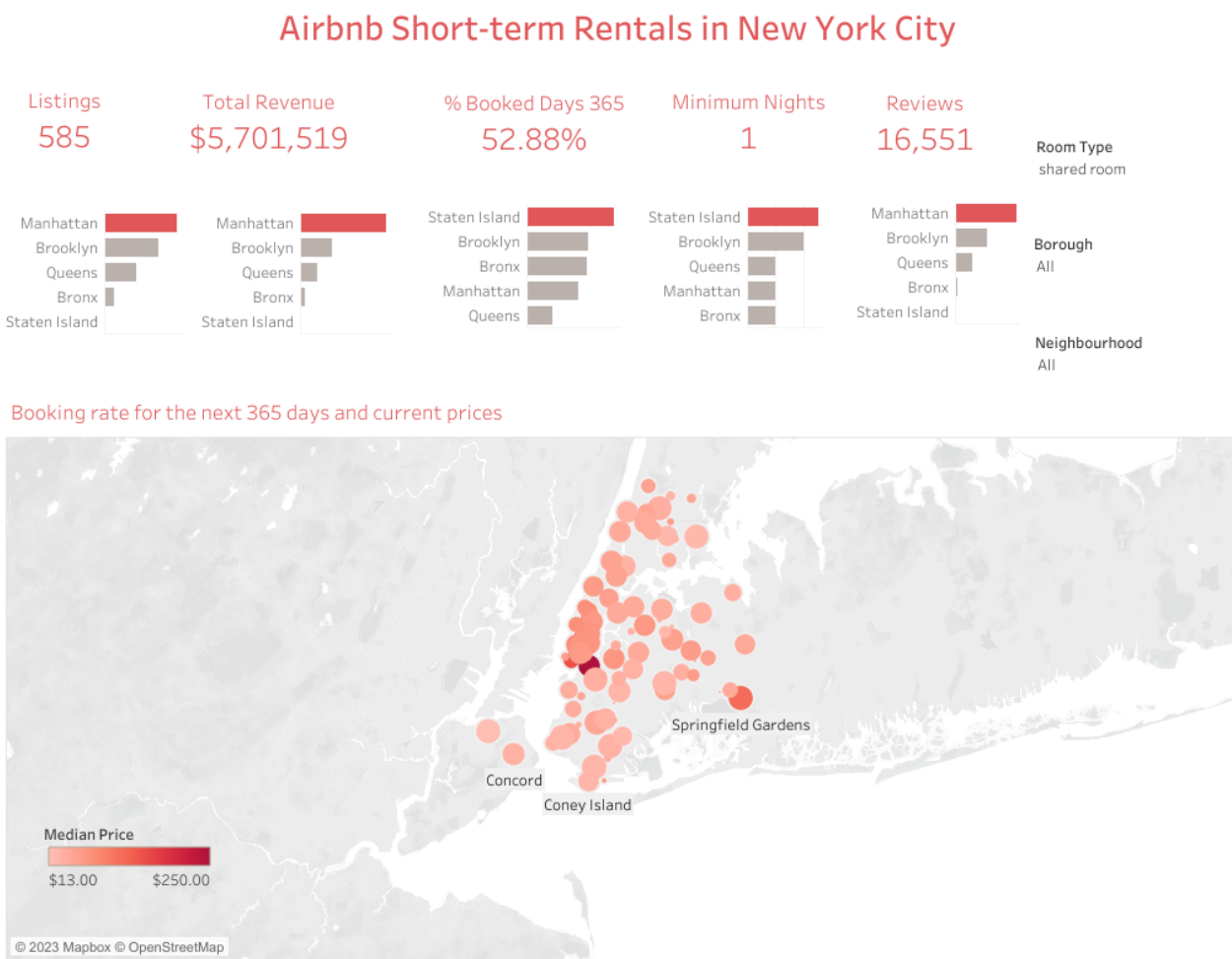
Recommendations

Upon analyzing the data at hand, it is evident that Manhattan and Brooklyn emerge as the most lucrative areas to establish our new real estate market across all property types. Taking this into consideration, my recommendation would be to concentrate our efforts on the entire home/apartment property type in either Manhattan or Brooklyn, with a particular emphasis on the Hell's Kitchen area in Manhattan and/or Williamsburg in Brooklyn. These locations show promising potential for success and growth in the short-term rental market.

We should work with the Data Engineering team to also include additional details, such as review sentiment, specific booking dates, and cancellation rates, to make our analysis more robust thus greatly enhancing our ability to gain more meaningful insights and make better-informed decisions regarding property offerings and revenue generation. The information provided in the data analyzed regarding the number of reviews doesn't give us insights into their sentiment, whether they were positive or negative. Knowing the overall score or sentiment of the reviews would be valuable in understanding how well customers perceived the offerings.

Additionally, the lack of information about specific booking dates, such as days, weeks, or months, over an extended period, limits our ability to perform trend analysis for past years and forecast analysis for the coming years. This data would be crucial in understanding the demand patterns and seasonal trends over time and making informed decisions based on projected demand.

Furthermore, the absence of data on cancellation rates prevents us from assessing the impact of cancellations on the rating of the property types and the potential revenue loss. Including this information would allow for a more comprehensive analysis of forecasted demand versus actual demand, leading to better insights and decision-making.