

# AIRBNB NYC

## Exploring Rental Diversity

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### Introduction

Airbnb is a widely recognized online marketplace that facilitates short-term lodging rentals, homestays, and tourism experiences. It allows individuals to rent out their properties or spare rooms to guests, offering a unique alternative to traditional hotels. In this analysis, we delve into Airbnb's extensive dataset to uncover insights about property distribution, pricing trends, and room types across different neighborhoods in New York City. Utilizing data visualization techniques with Tableau, we aim to provide a comprehensive understanding of the Airbnb landscape in NYC.

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## Data Description

The dataset represents a snapshot of Airbnb listings in New York City at a given time. It comprises various fields, each offering valuable information about the properties and hosts. Here's a breakdown of key fields:

1. **id**: Airbnb's unique identifier for the listing.
2. **name**: Name of the listing.
3. **host\_id**: Airbnb's unique identifier for the host/user.
4. **host\_name**: Name of the host.
5. **neighbourhood\_group**: The broader geographical area within NYC where the property is located.
6. **neighborhood**: Specific neighborhood within the neighbourhood group.
7. **latitude and longitude**: Geographic coordinates of the property.
8. **room\_type**: Type of accommodation offered (e.g., Entire home/apt, Private room, Shared room).
9. **price**: Price per night for the listing.
10. **minimum\_nights**: Minimum number of nights required for booking.
11. **number\_of\_reviews**: Total number of reviews received for the listing.
12. **last\_review**: Date of the last review.
13. **reviews\_per\_month**: Average number of reviews per month.
14. **calculated\_host\_listings\_count**: Number of listings managed by the host.
15. **availability\_365**: Availability of the listing in the next 365 days.

## Exploratory Data Analysis:

The dataset provides a comprehensive view of Airbnb listings in NYC, enabling us to explore various aspects of the hospitality landscape. Some noteworthy statistics include:

- *Neighborhood Groups*: The dataset covers **five** distinct neighborhood groups: Bronx, Brooklyn, Manhattan, Queens, and Staten Island.
- *Neighborhoods*: There are a total of **221** neighborhoods within these five groups.

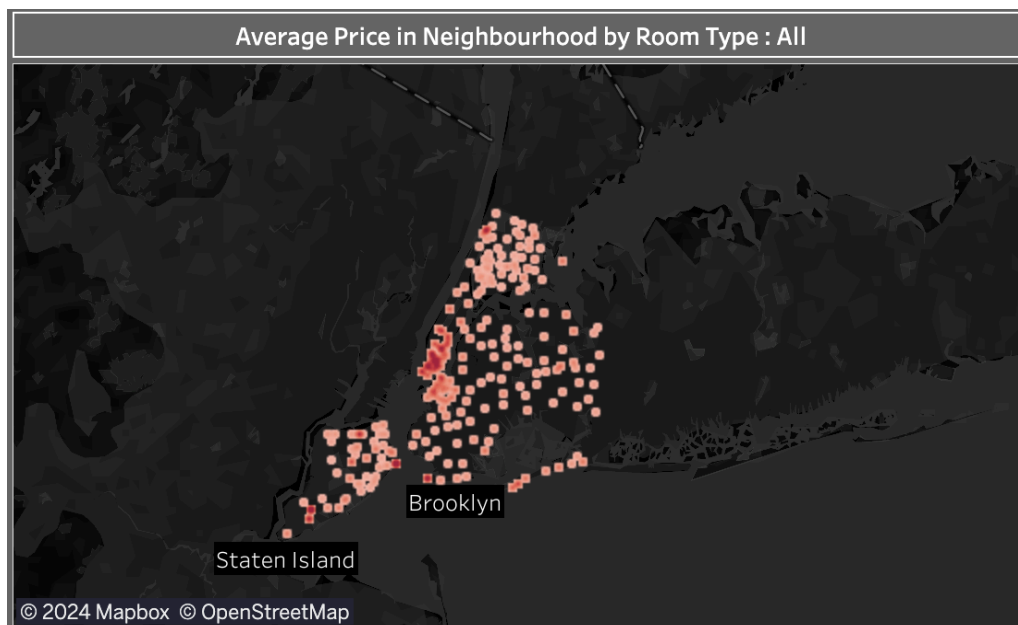
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- *Hosts*: The dataset comprises **37,457** unique hosts offering accommodations in NYC.
  - *Total Reviews*: The cumulative number of reviews for all listings amounts to **1,138,000**.
  - *Properties*: There are **38,619** properties in the dataset, identified by calculating a unique property ID from the concatenation of host ID, latitude, and longitude.

## Analysis

Our analysis aims to uncover insights into the distribution of Airbnb listings, pricing dynamics, and host behavior. Through data visualization, we explore several key aspects; some of them are as following :

### Average Price in Neighborhoods by Room Type:

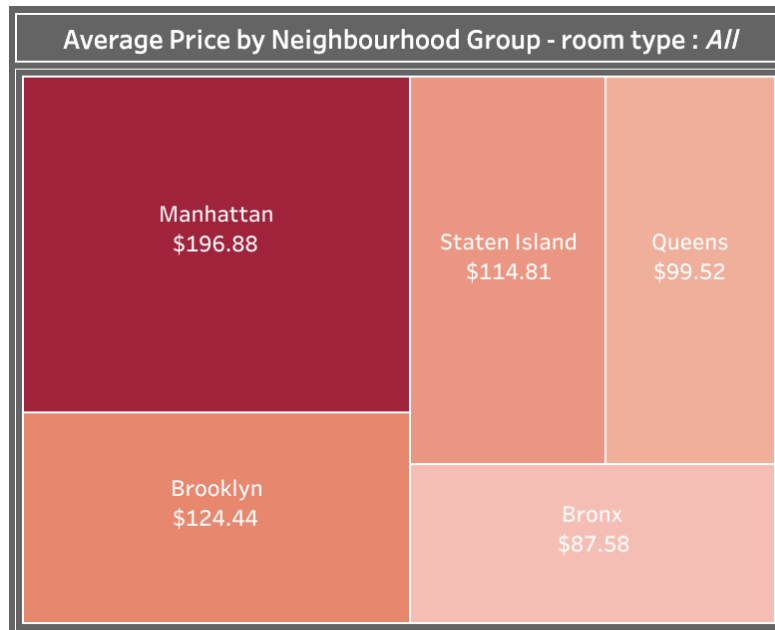
Visualizing the average nightly price across NYC neighborhoods, categorized by room type. This is a geo map; constructed utilizing latitude and longitude. Each point is shaded based on range of average price



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### Average Price by Neighborhood Group:

Examining the average price per night in each neighborhood group. This gives the overall perspective of which areas are most expensive.



### Number of Properties by Neighborhood Group and Room Type:

Analyzing the distribution of properties across neighborhood groups and room types. A unique property ID from the concatenation of host ID, latitude, and longitude. Unique property helps us understand where the availability of rentals are the most.

Number of Properties per Neighbourhood Group and Room Type					
	Bronx	Brooklyn	Manhattan	Queens	Staten Island
Entire home/apt	334	8,749	10,830	1,879	156
Private room	477	7,947	6,380	2,323	120
Shared room	44	209	357	133	6

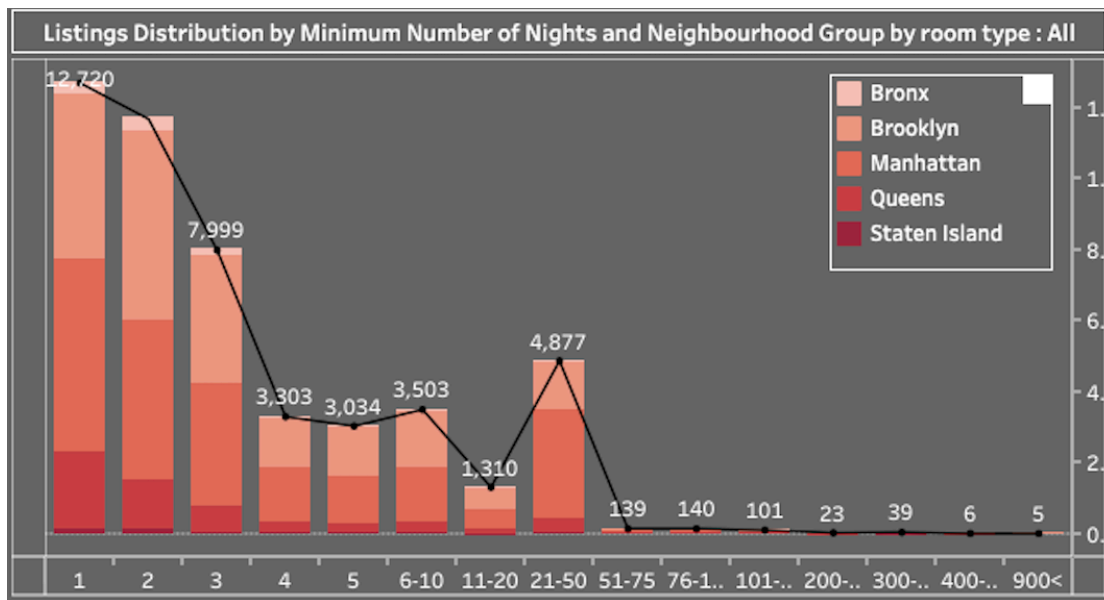
### Top Hosts by Number of Listings:

Identifying hosts with the highest number of listings and exploring associated metrics such as average price per host, total properties, and number of reviews.

Top Hosts by Number of Listings				
Host Name	Avg. Price	Distinct count of Property ID	Number Of Reviews	Number of Listings
Sonder (NYC)	\$253.20	4	1,281	327
Blueground	\$303.15	10	29	232
Kara	\$277.53	8	65	121
Kazuya	\$43.83	9	87	103
Sonder	\$213.03	5	43	96
Jeremy & Laura	\$208.96	10	138	96
Corporate Housing	\$146.24	8	417	91
Ken	\$215.44	11	55	87

### Distribution of Hosts and Properties:

Investigating the distribution of hosts based on the number of properties they manage, as well as the distribution of properties based on minimum nights required for booking.



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### Room Type Distribution:

Exploring the prevalence of different room types (Entire home/apt, Private room, Shared room) among Airbnb listings. The filter allows us to see through various features distribution by the Room Type.

### Important Insights :

- Average price per night is highest in Manhattan (\$196.88), reflecting its status as a prime location for accommodations.
- Manhattan also boasts the highest number of listings across all room types and hosts the most neighborhoods among the neighborhood groups.
- The Bronx offers the lowest average price per night, while Staten Island has the fewest number of listings.
- Most hosts manage only 1 or 2 properties, indicating a predominance of individual property owners rather than large-scale operators.
- The majority of listings require a minimum stay of 1, 2, or 3 nights, catering to short-term travelers.
- Shared rooms constitute a minority of listings, with the majority offering entire homes or private rooms for rent.