



# **AIRBNB IN NEW YORK CITY - IMPACT OF NEIGHBORHOODS**

**AN EXPLORATORY DATA ANALYSIS PROJECT**

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# THE LISTINGS ON AIRBNB — AN ANALYSIS

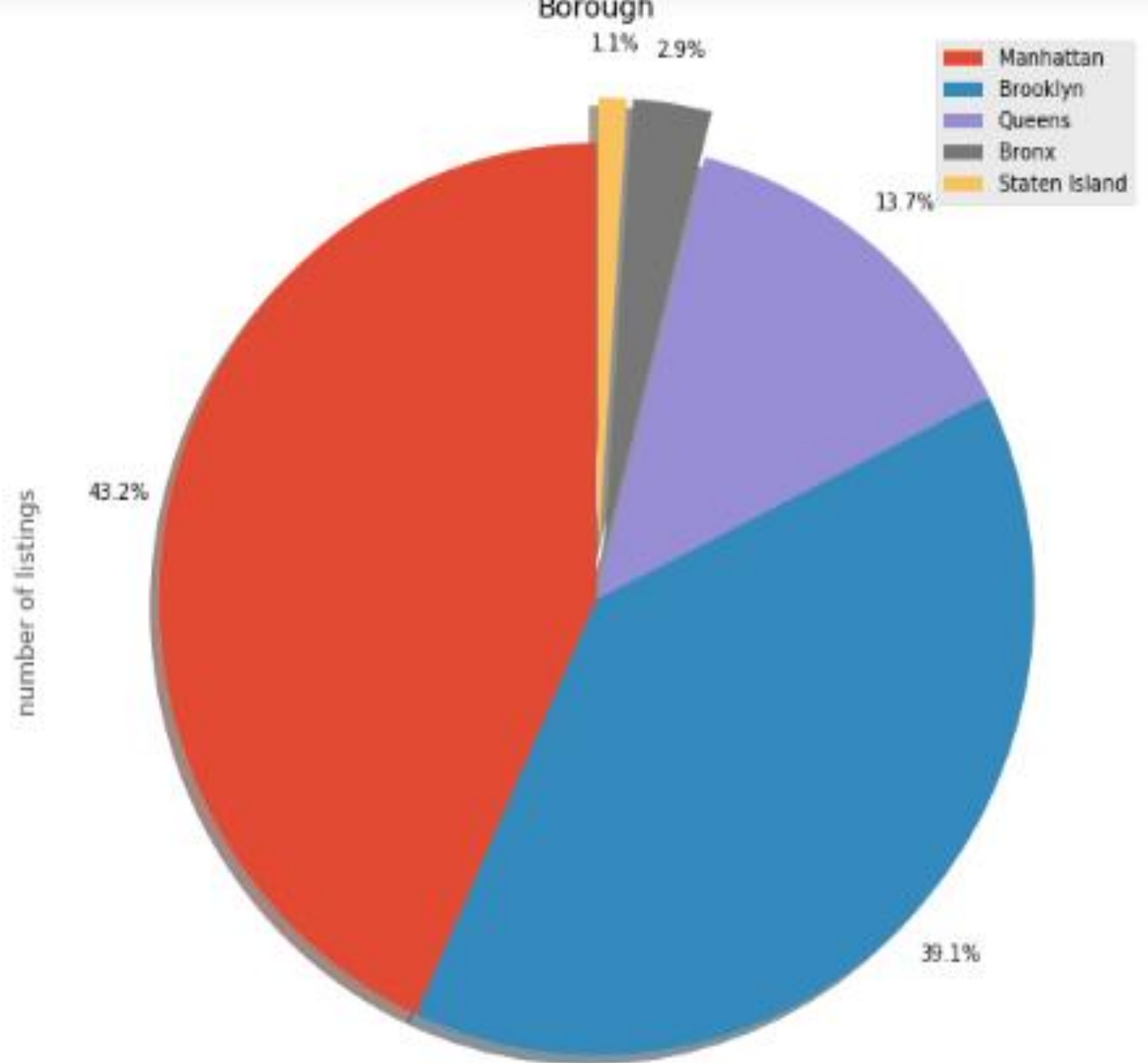
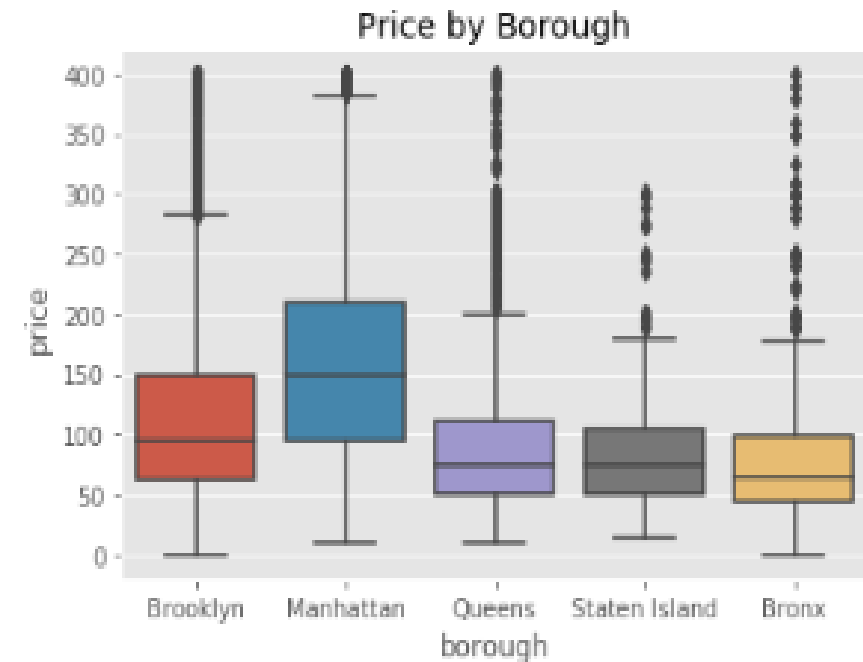
- **Airbnb** — an online marketplace for accommodations, lodgings and home-stays
- The price and popularity of the listings depends on various parameters
- Nearby venues or neighborhood can be an important determining factor
- Understanding these patterns may help to guide marketing initiatives or may help to implement innovations

# THE DATA — CLEANING AND WRANGLING

- Dataset — **New York City Airbnb Open Data** on Kaggle
- In total, 48,895 rows and 16 columns present in the raw dataset
- Processing the null values — by removing and replacing
- Dropping features not required for analysis
- Foursquare API to be used for geolocation service
- Final dataset has 31,358 rows and 11 columns

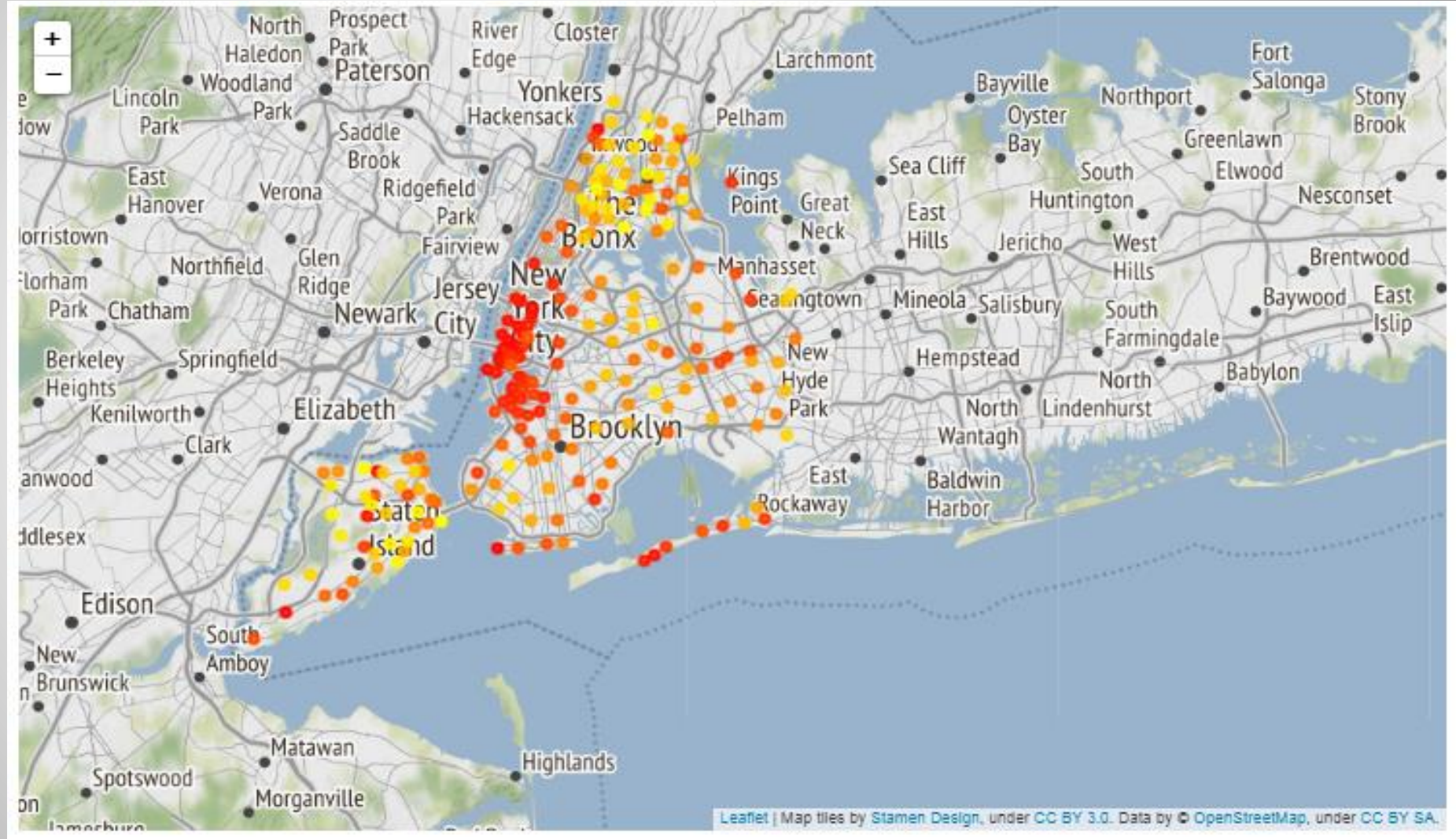
# BOROUGH

**Manhattan** followed by **Brooklyn** – areas with most listing and higher median price



# NEIGHBORHOODS

Neighborhoods in Manhattan have higher average price than neighborhoods in **Bronx** or **Staten Islands**

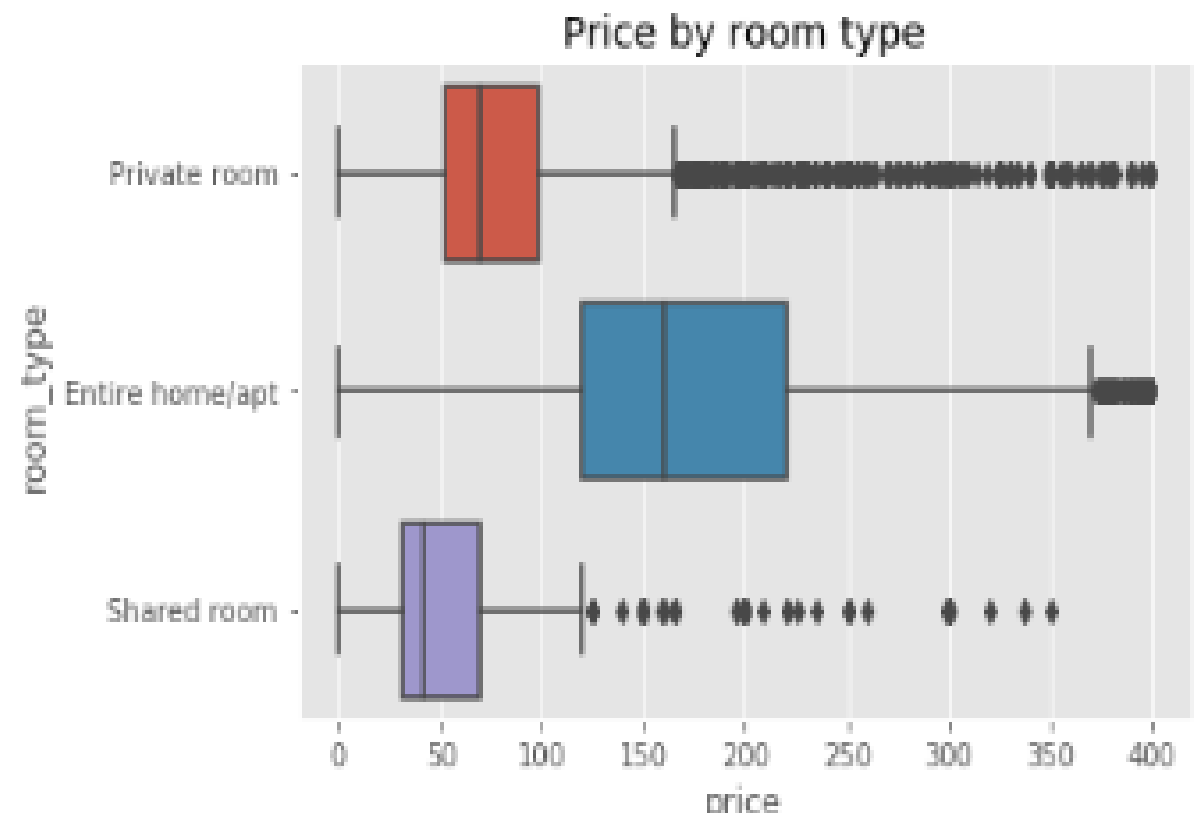
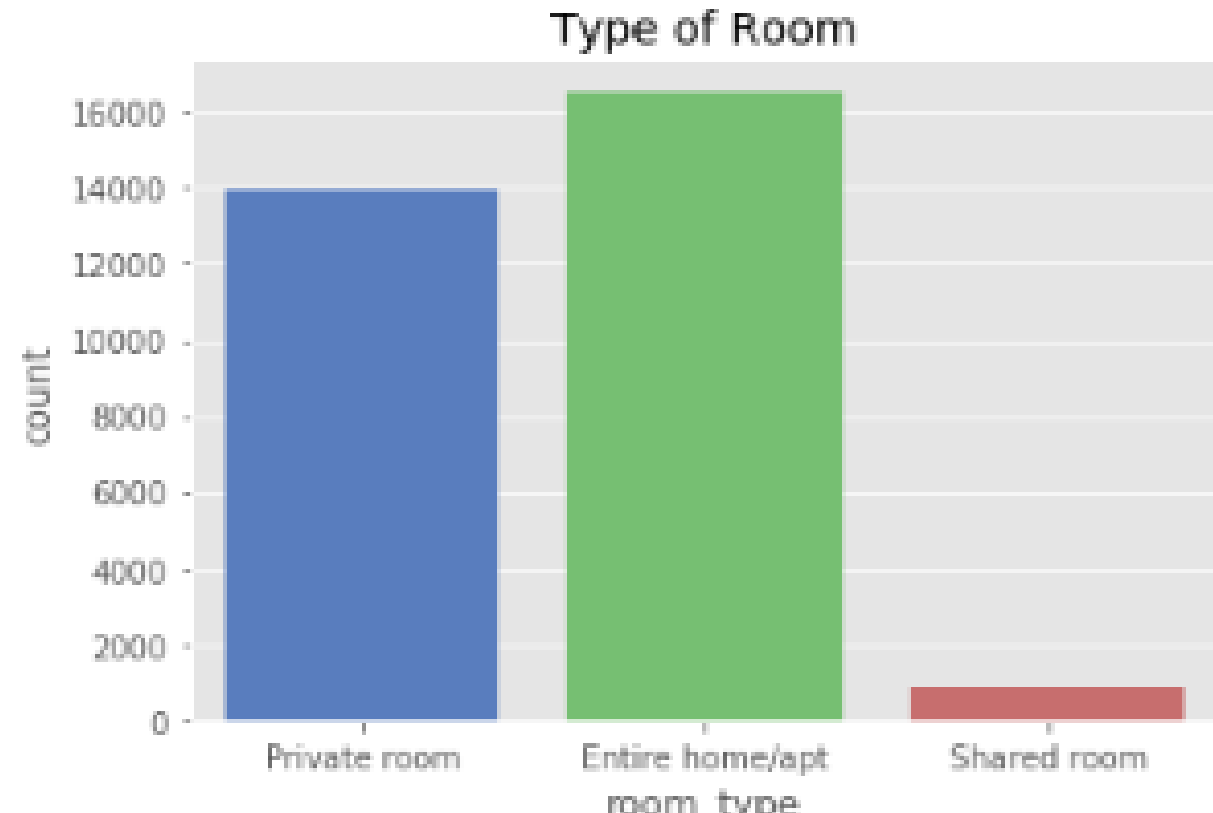




# ROOM TYPE

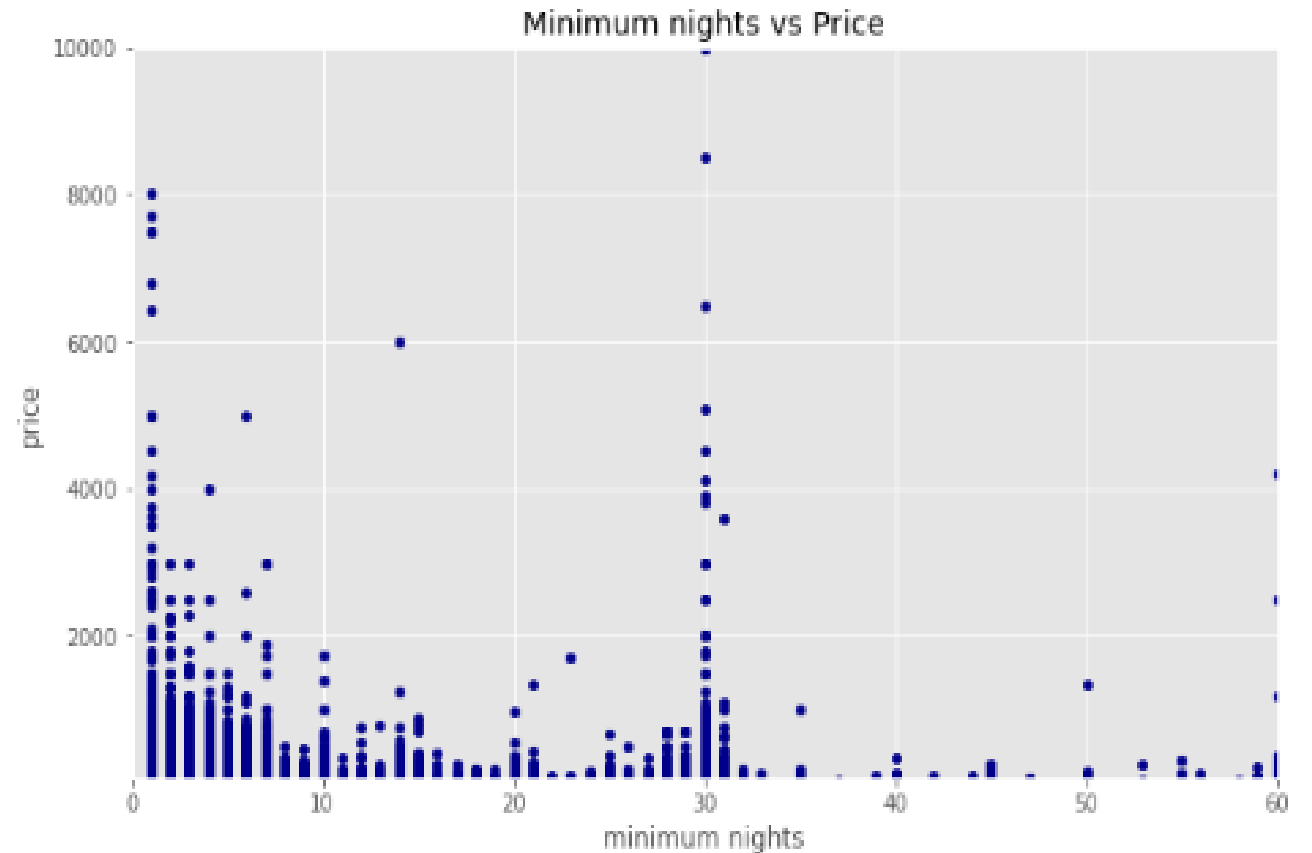
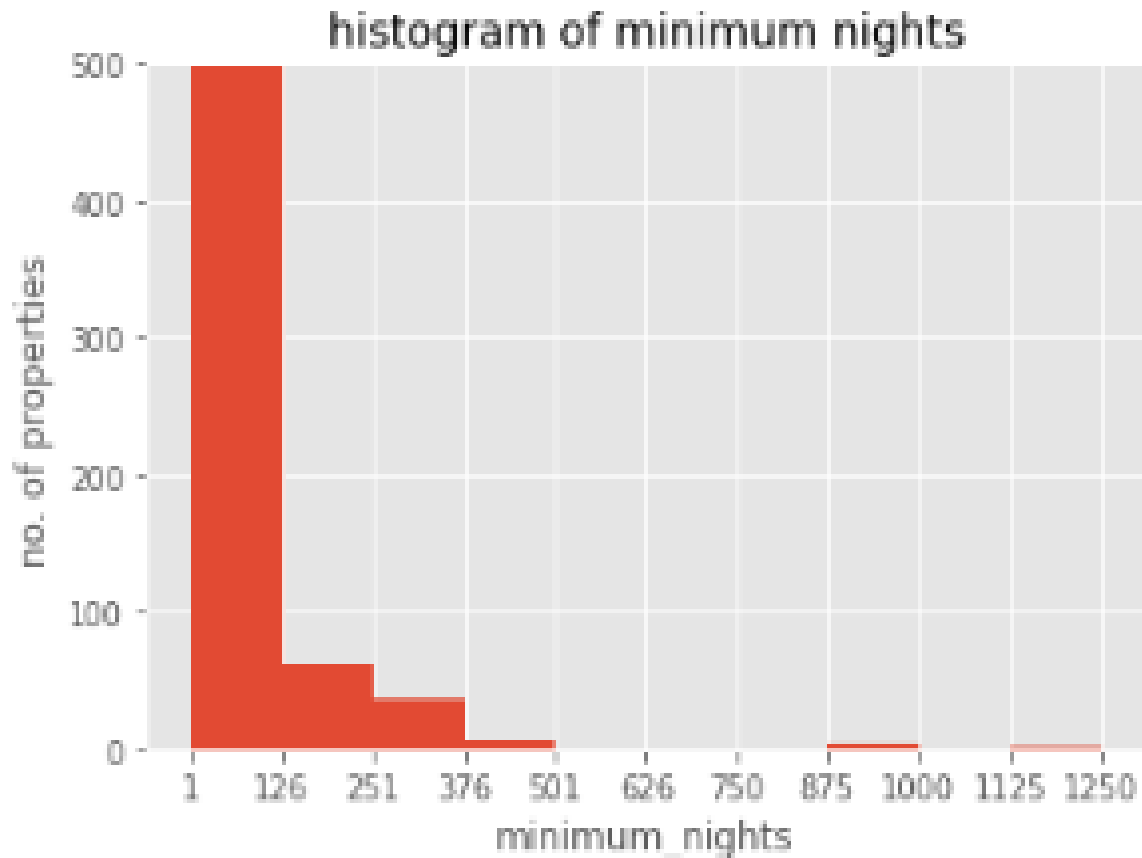
*Shared rooms* are **least popular**

*Entire Homes/Apartments* are the **most expensive**



# MINIMUM NIGHTS

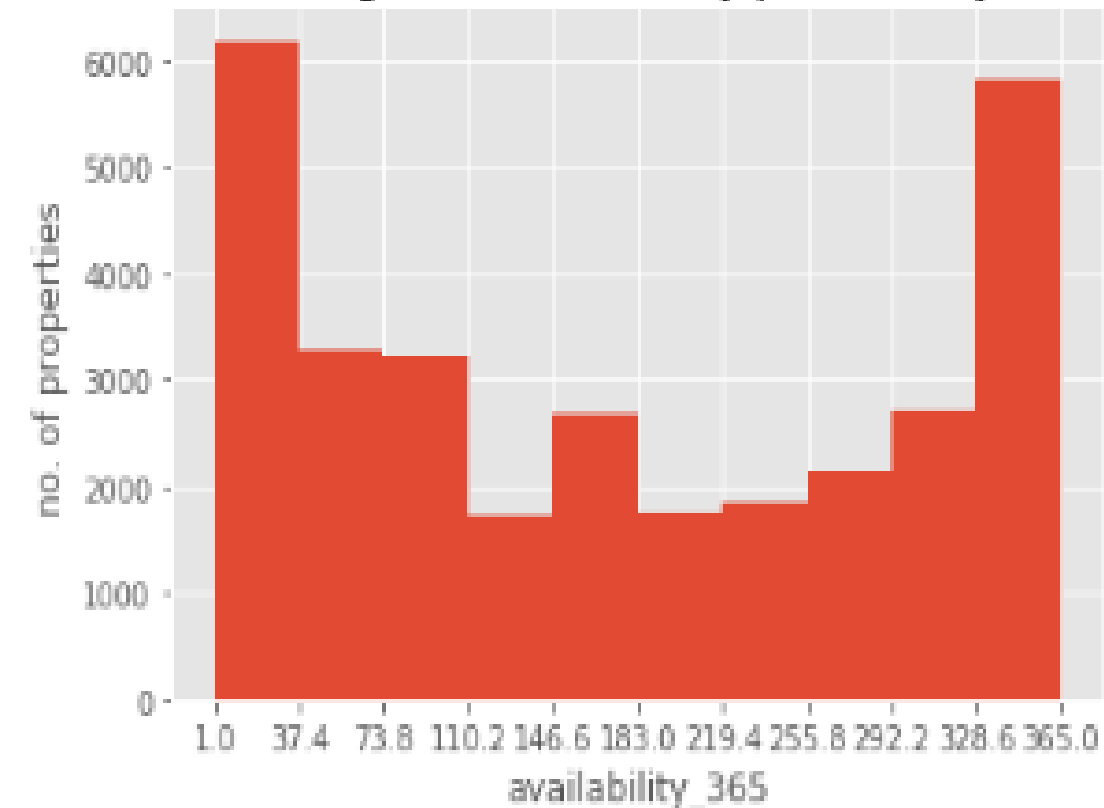
Most properties can be booked for minimum of 1-126 nights



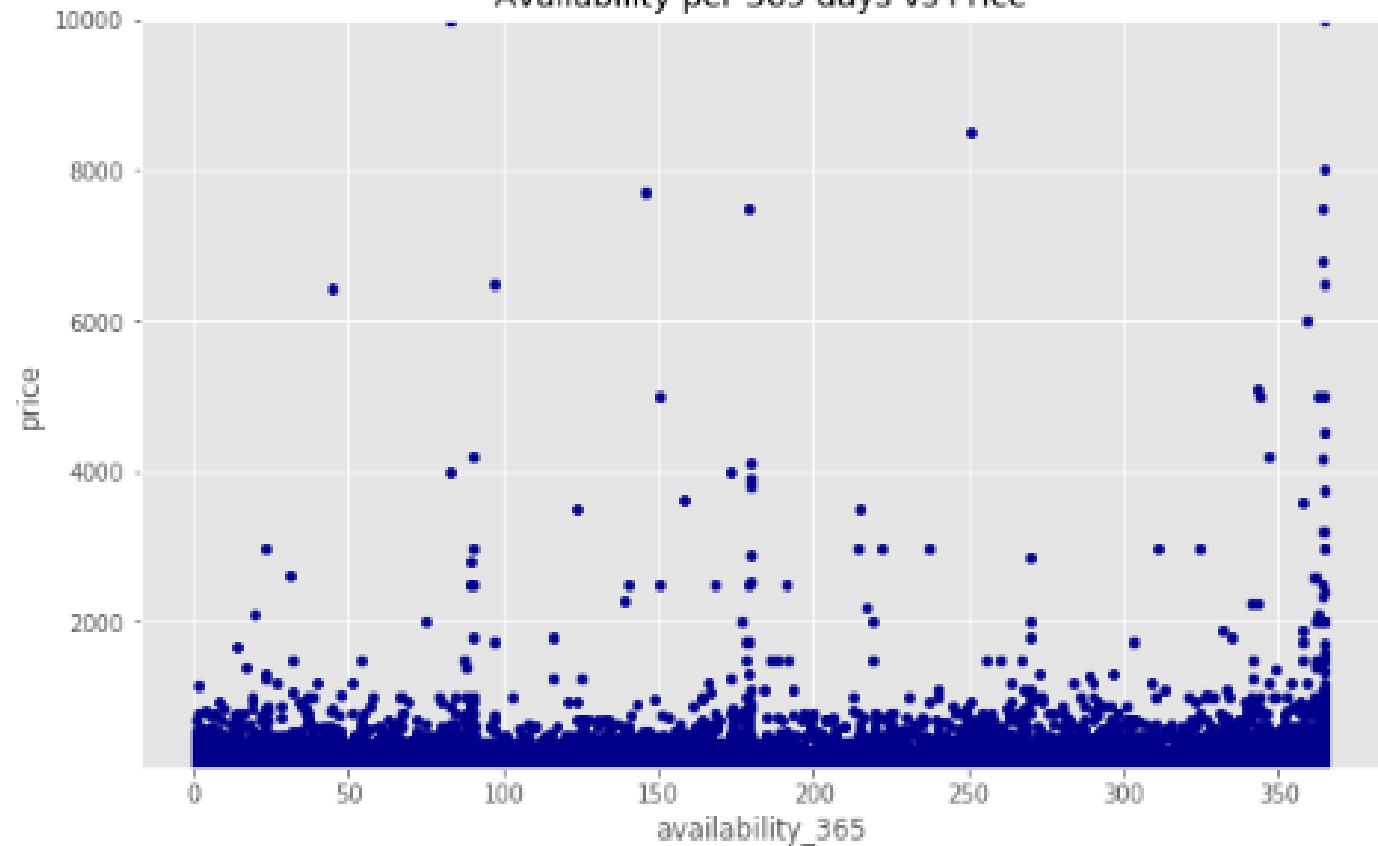
# AVAILABILITY 365

Most properties available for either throughout the year or for a very limited time – a day or a week

histogram of availability per 365 days



Availability per 365 days vs Price





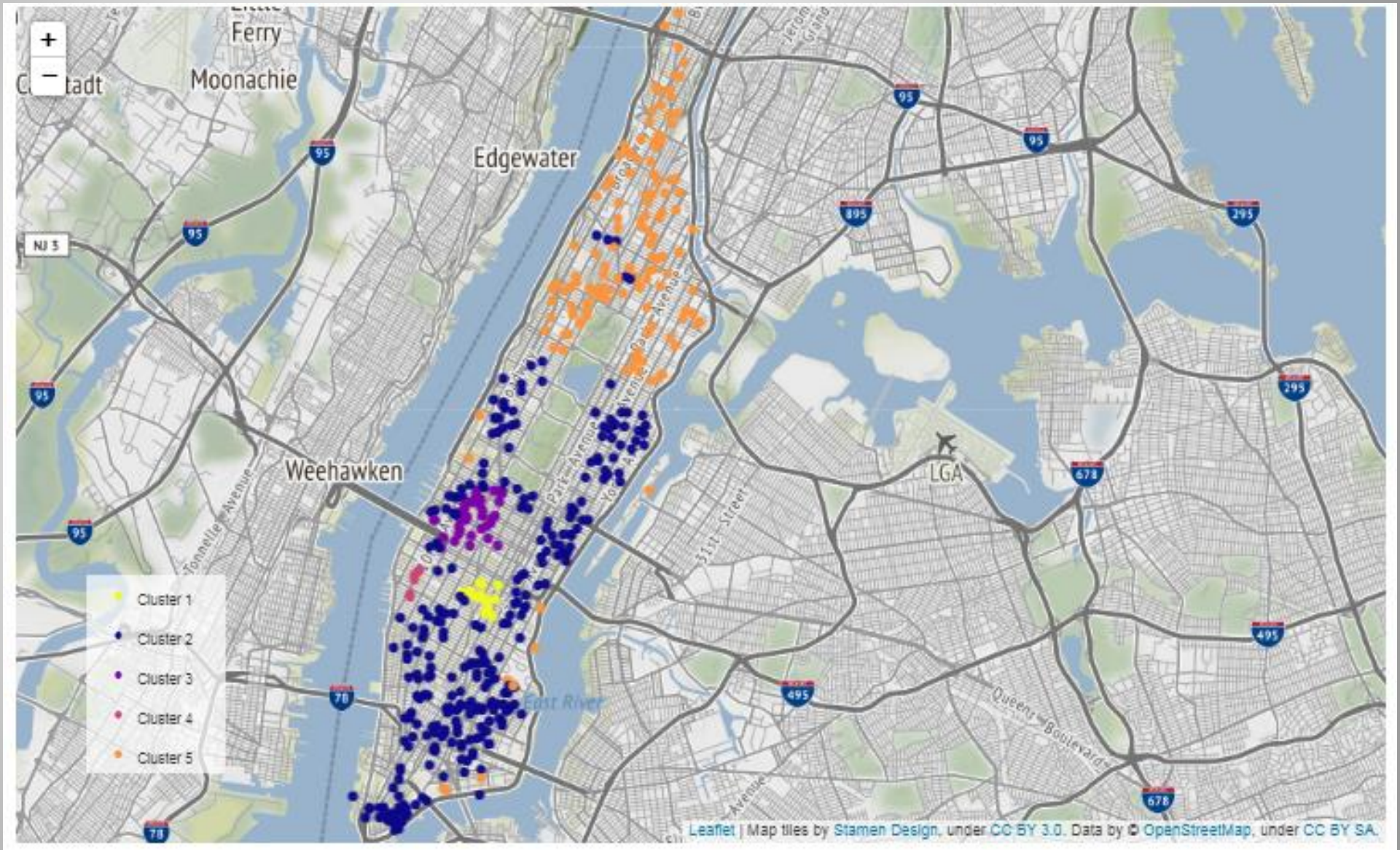
# NAMES

**PRIVATE ROOMS**  
in **MANHATTAN**  
- the most  
common listing



# KMEANS CLUSTERING

The 5 clusters of  
Manhattan –  
basis nearby  
venues





# CONCLUSION & FUTURE SCOPE

- Private Rooms in Manhattan – most popular listings
- *Manhattan* and *Brooklyn* have the most number of listings and the highest prices for the properties
- *Shared rooms* are least favored and *entire homes/apartments* are more expensive
- The locality of Manhattan distributed into 5 clusters show distinct traits, popularities and price ranges
- Future scope – These parameters can be used for predictive modelling – for predicting prices of the listings basis the features