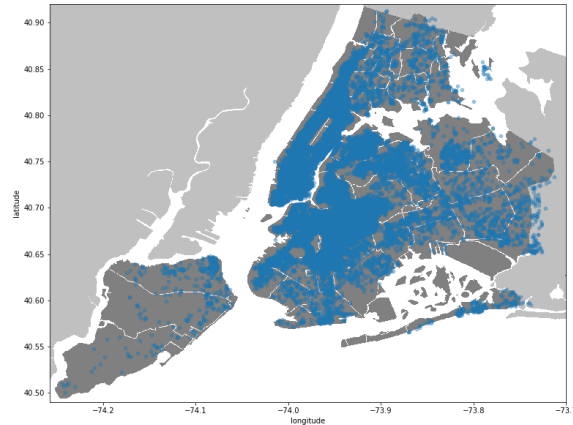


## Report Project Airbnb in New York

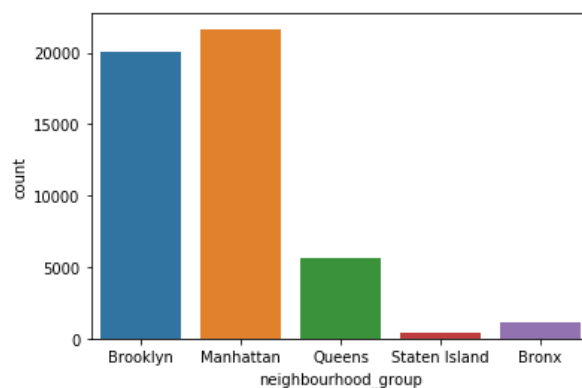
### AIRBNB DISTRIBUTION IN EACH NY BOROUGHS



The map shows the Airbnb distribution related to each NY borough.

It is possible to observe a high points density around Brooklyn and Manhattan, whereas the points density tends to decrease in the other areas (i.e. Bronx, Queens and Staten Island). Specifically, Staten Island seems to be the area with the lowest Airbnb concentration.

This trend is supported by the plot below which takes into account the listing count as an index of the different NY boroughs. The plot reveals that Manhattan is the borough with the greatest number of Airbnb listings and, as already shown above, Staten Island is the borough with the lowest number of listings.

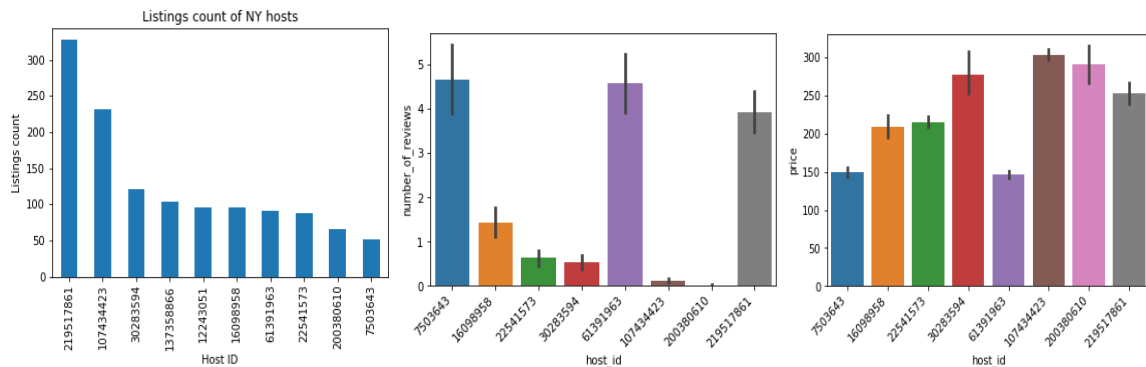


### HOSTS INFORMATION

In this section, hosts information will be discussed by considering three parameters:

i. number of listings; ii. number of reviews; iii. price.

This information is reported in the plots below, which contain evidence on the top 10 listing hosts (i.e. hosts IDs).



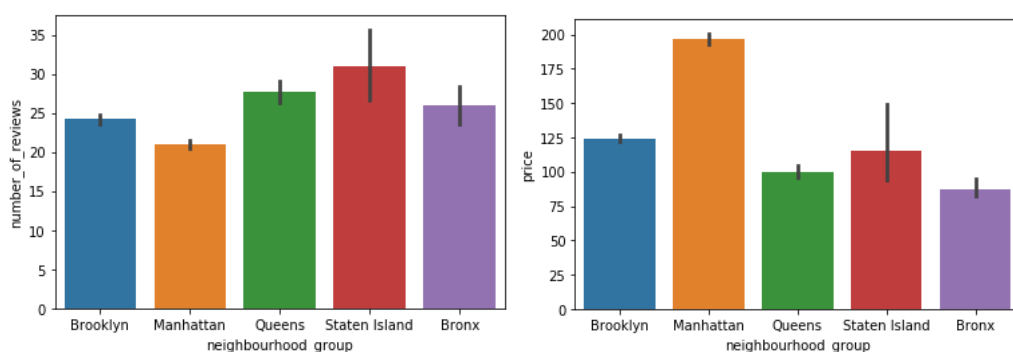
The left-sided plot shows that the hosts with ID, respectively, 219517861 and 107434423 are the ones with the highest number of listings on Airbnb website. Interestingly, as the plot in the middle shows, the number of listings does seem unrelated to the number of customers' reviews, since more reviewed hosts have lower listings count than less reviewed hosts (e.g. 7503643, 61391963). Data on the valence/sentiment of the reviews would be needed to effectively understand the "popularity" of these IDs.

As for the price, the right-sided plot shows that the hosts with ID 107434423 and 200380610 are the most expensive. In particular, the 200380610 ID host has offered above-average prices in spite of the low number of listings and number of reviews.

## BOUROUGH INFORMATION

In this section, hosts information will be discussed by considering three parameters:

i. number of reviews; ii. price.

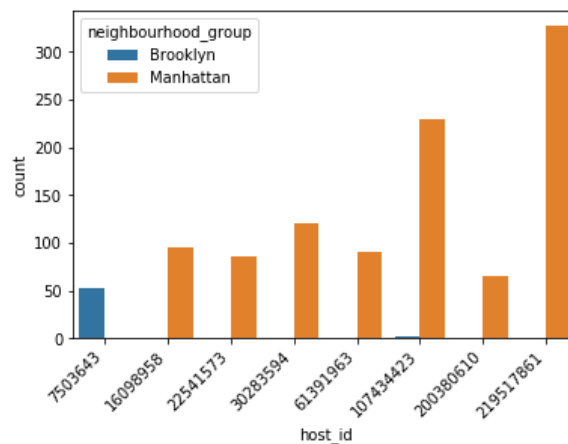


Although the lowest number of listings in this area, Staten Island has the highest number of reviewed Airbnb. Bronx and Queens have a similar trend, that is low Airbnb frequency and high number of reviews. As regards the price, the plot shows that Manhattan is the priciest borough, whereas Bronx the cheapest one.

## CROSSING BUROUH AND HOSTS INFORMATION

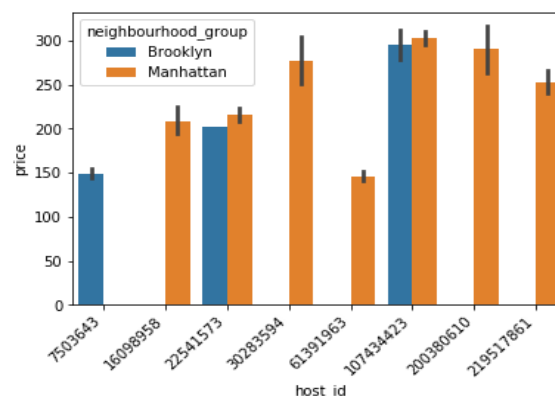
This section is aimed at investigating i. what are the boroughs of the 10 top listing hosts; ii. what are the Airbnb prices in relation to borough and prices taken together.

### Boroughs of the 10 top listing hosts



The plot above shows that the 10 most listing hosts are mainly spread in Brooklyn and Manhattan, whereas nobody is located in the other main boroughs. This evidence reflects data on the entire sample distribution around NY, which shows a high Airbnb density within these two areas.

### Airbnb prices as a function of borough and host id

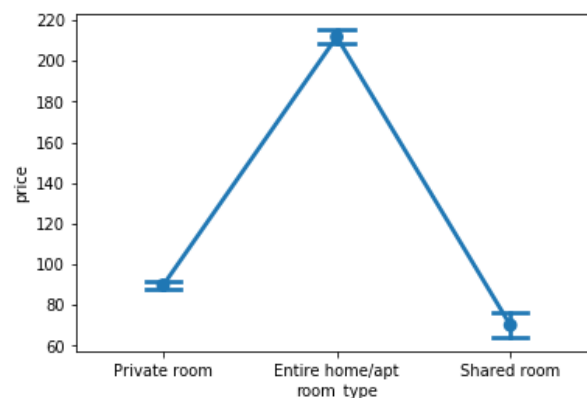


This plot substantially replicates conclusions mentioned before ahead. Information about 107434423 host is probably the most relevant contained in this plot. This host owns Airbnb properties in both Brooklyn and Manhattan, which are rated at above-average prices respect to what reported in these areas (i.e. about 200 \$ per night in Manhattan and 125 \$ per night in Brooklyn).

## ROOM INFORMATION

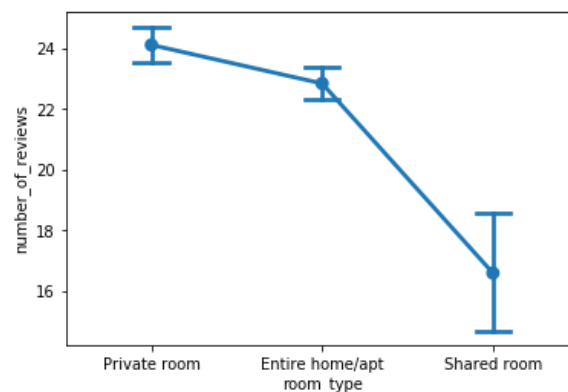
This section is aimed at investigating i. price variation based on the type of room; ii. number of reviews based on the type of room; iii. price variation based on the type of room and the borough; room type count based on host id.

### Price and type of room



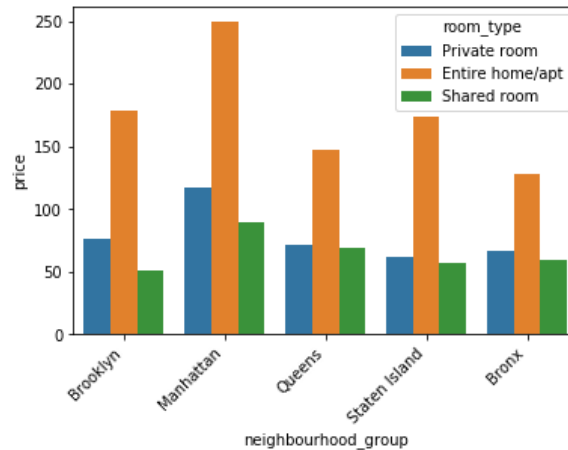
Entire home/apartments are substantially, and probably significantly (to be tested through inferential statistics; i.e. p-value), pricier than private rooms and shared rooms.

### Number of reviews and type of room



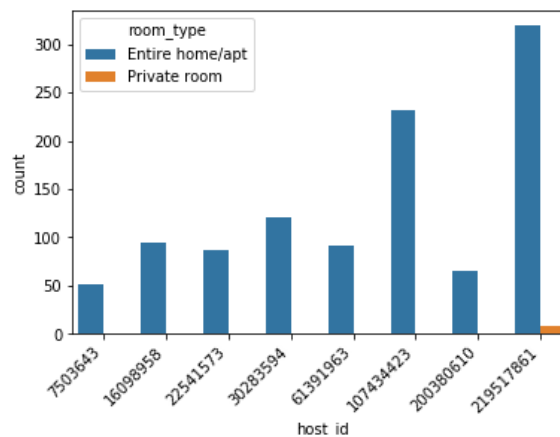
Private rooms are more reviewed than apartments and shared rooms. Shared rooms level present high variability (see large error bar), probably due to the low number of Airbnb shared rooms in NY that make this prediction unstable.

**Price, type of room and borough**



The plot above does not reveal price relevant differences by considering the factor borough. Conversely, the trend seems to support the main effect of room type, reported in the first plot of this section.

**Room type count and top 10 hosts id**



The plot shows that almost the totality of the 10 more listing hosts own an apartment. This explains the above-average prices found for this subgroup in the previous sections.