

# Capstone Project - 1

## Airbnb Booking Analysis

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# Problem Statement

To explore and analyze the given data set and draw conclusions.

# Data Pipeline

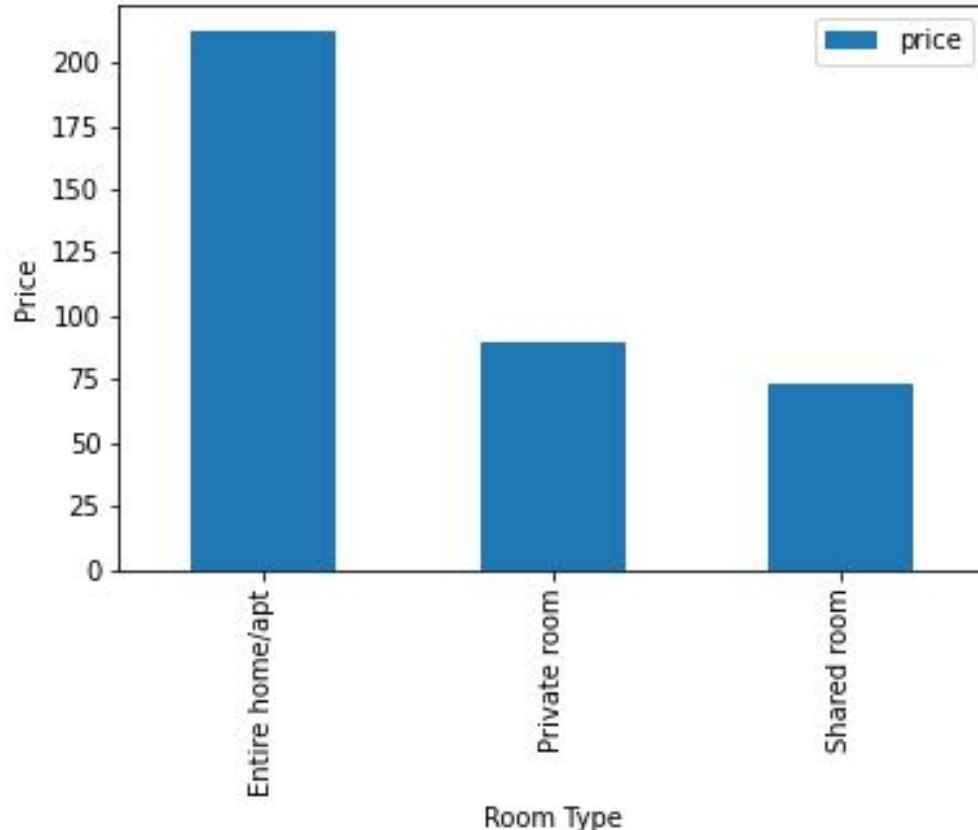
- Data overview
- Treating null values
- Dropping unimportant data
- Data sanity check
- Dealing with outliers
- Perform EDA

# Data Summary

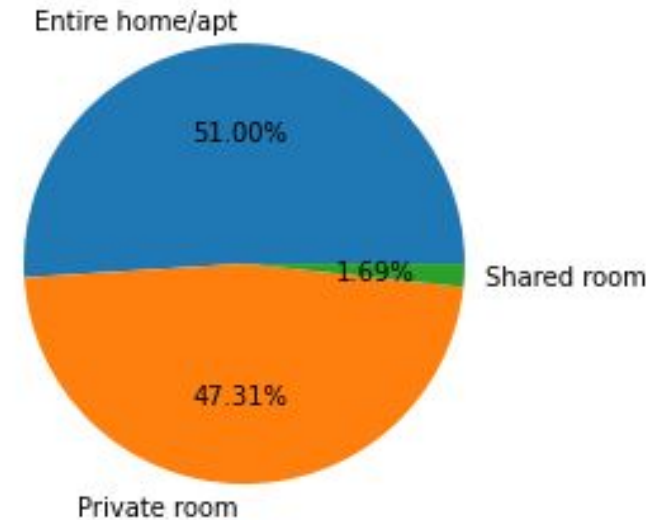
- Data set- Airbnb NYC 2019 - contains observations of bookings done in 5 neighbourhood groups in New York City through Airbnb.
- Rows- 48895
- Columns- 16
- Room types - Entire homes/apt, private rooms, shared rooms
- Neighbourhood groups- Manhattan, Queens, Staten Island, Bronx, Brooklyn

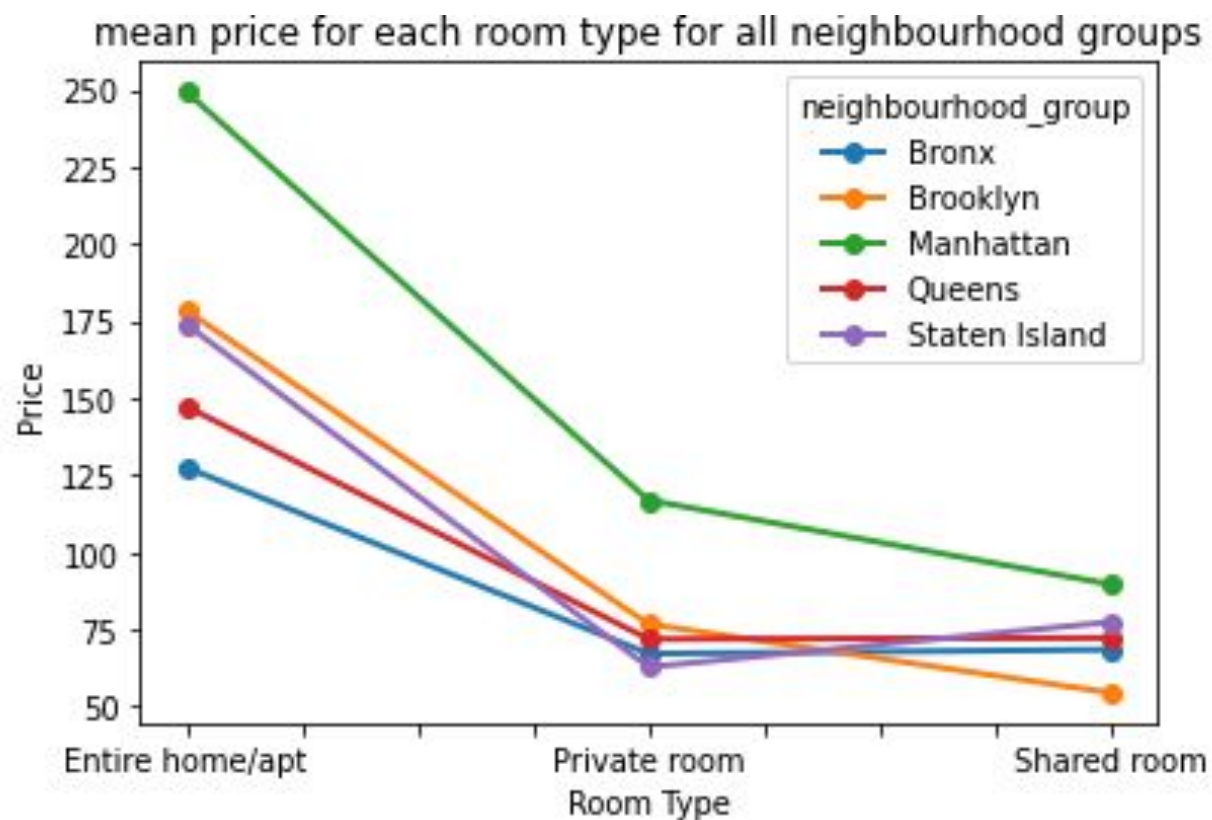
# Price-room type booking analysis

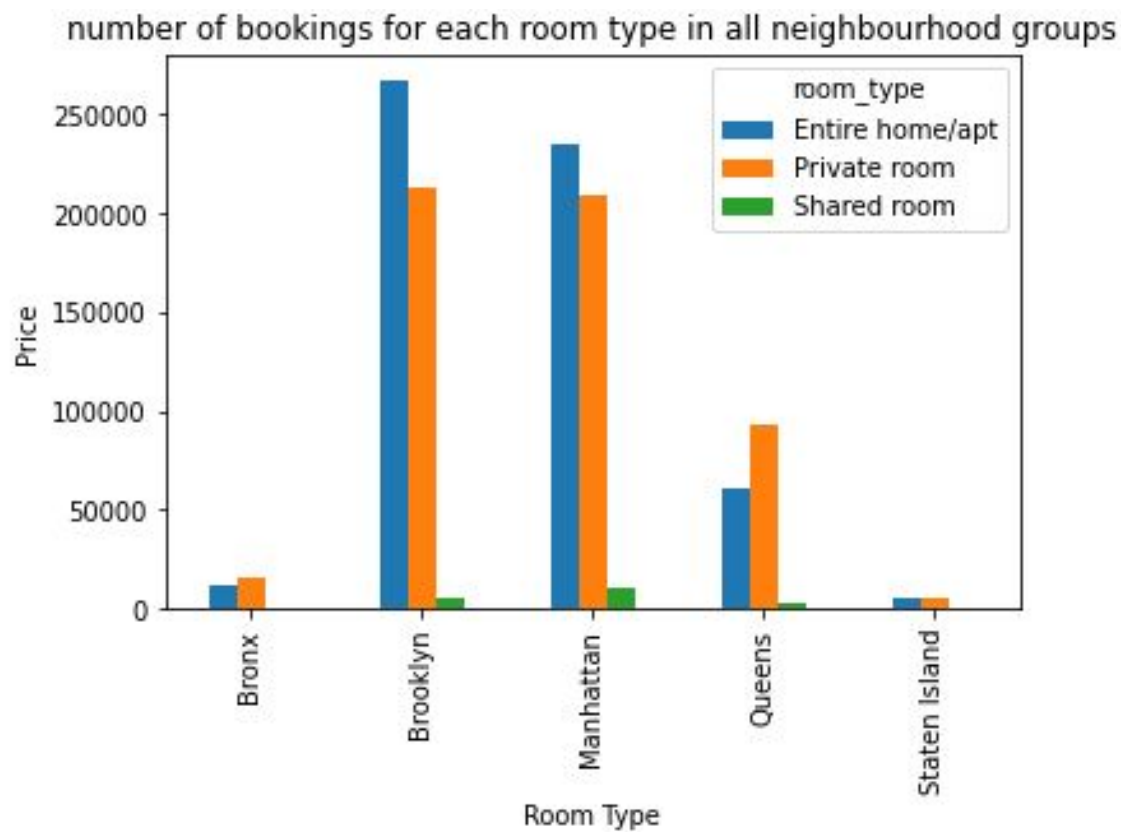
Mean price for different room types



which room type is booked the most

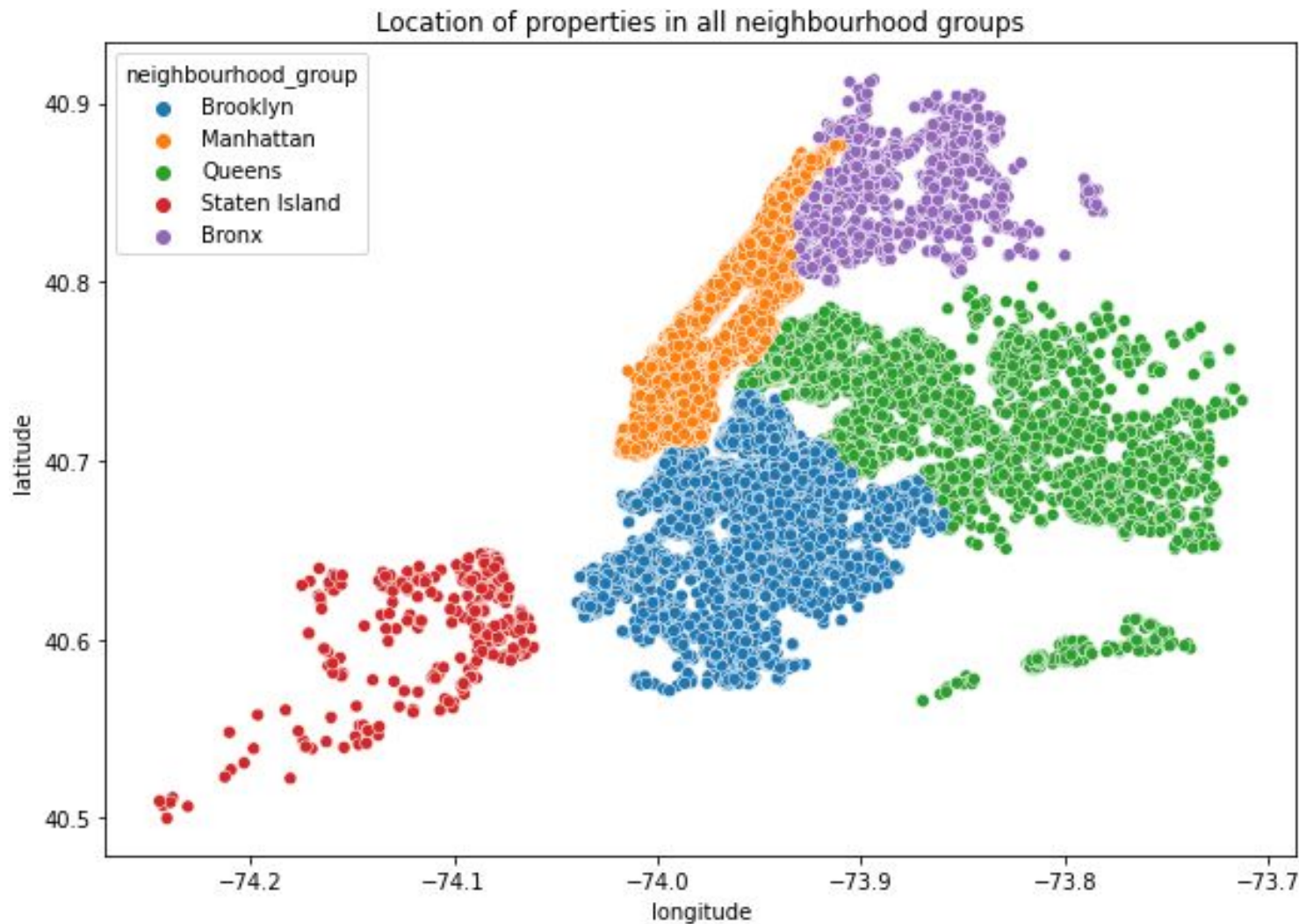


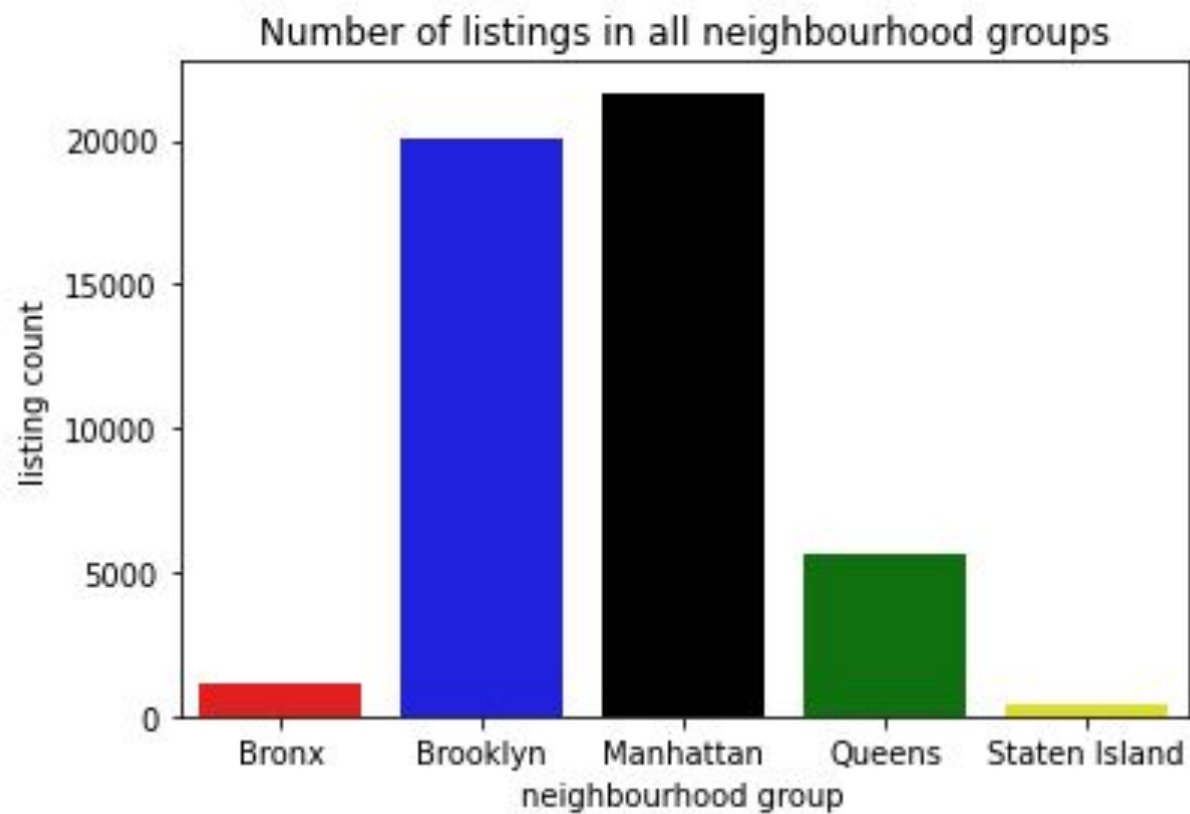




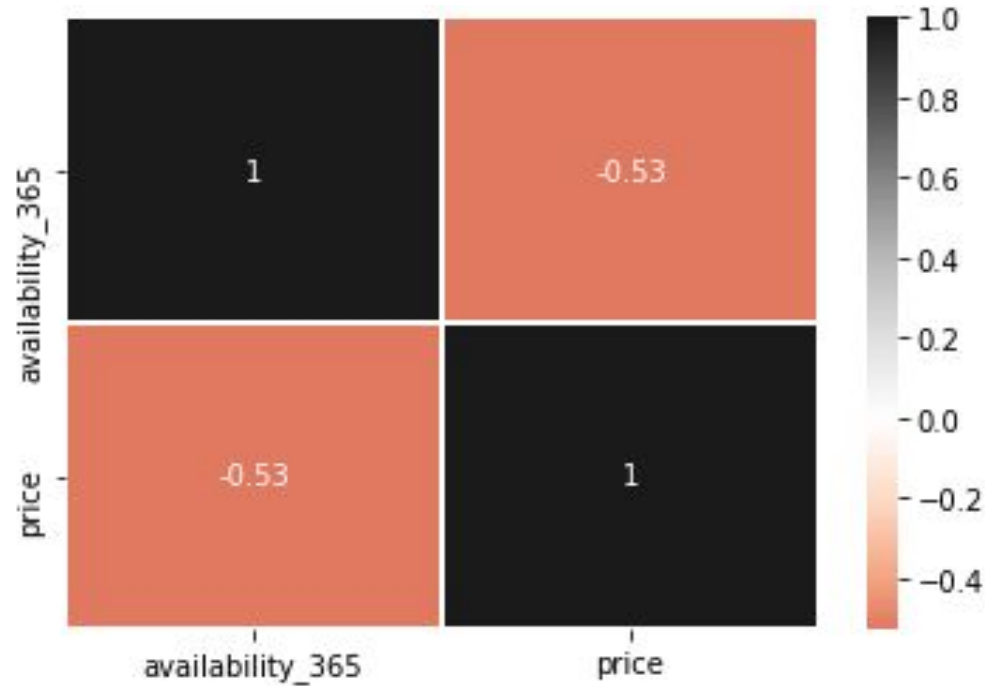


# Plot





# Price-availability correlation



# Most successful host

```
most_successful_host['host_name'][0]
```

```
'Sonder (NYC)'
```

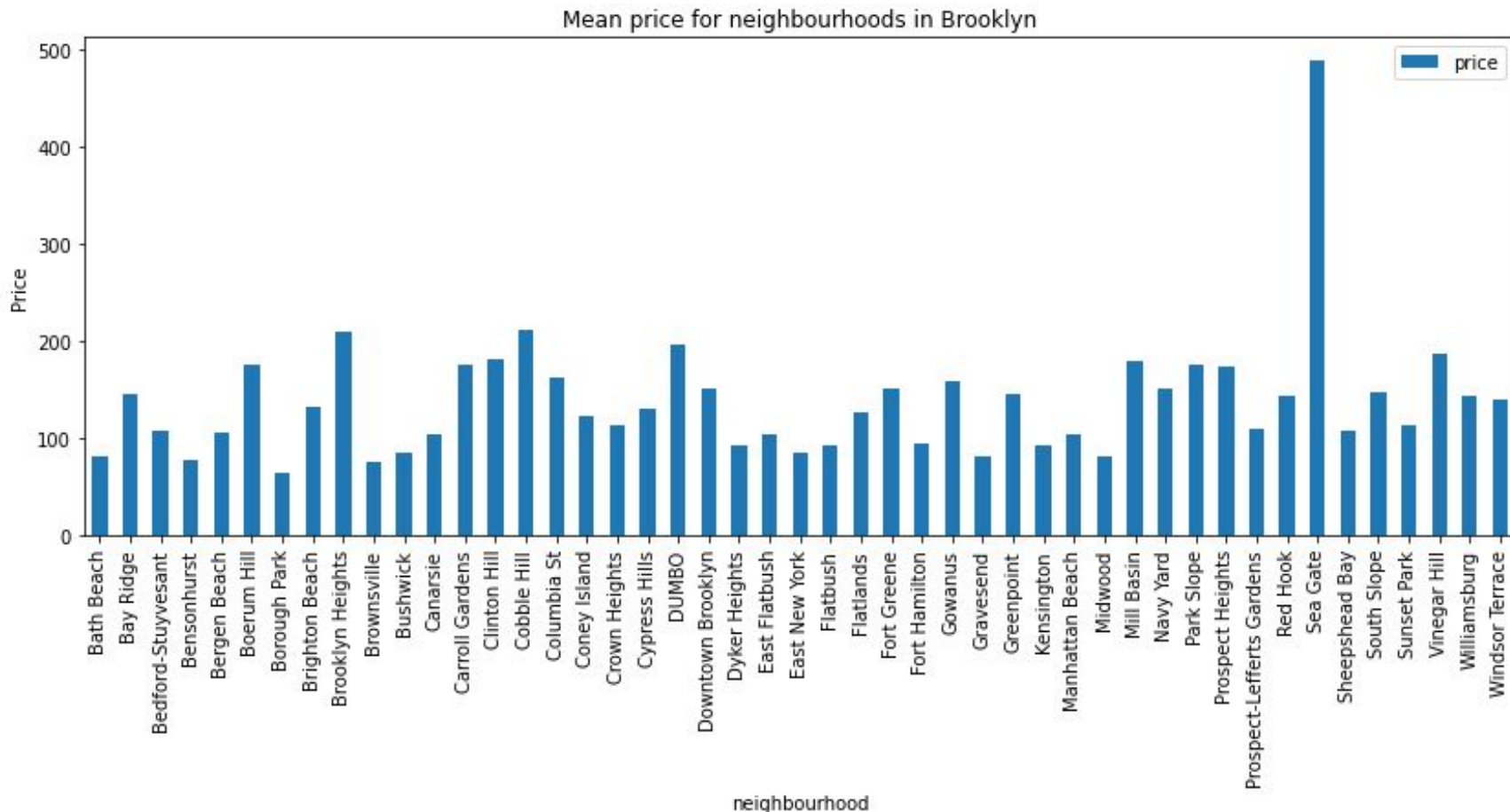
```
most_successful_host['neighbourhood_group'].unique()
```

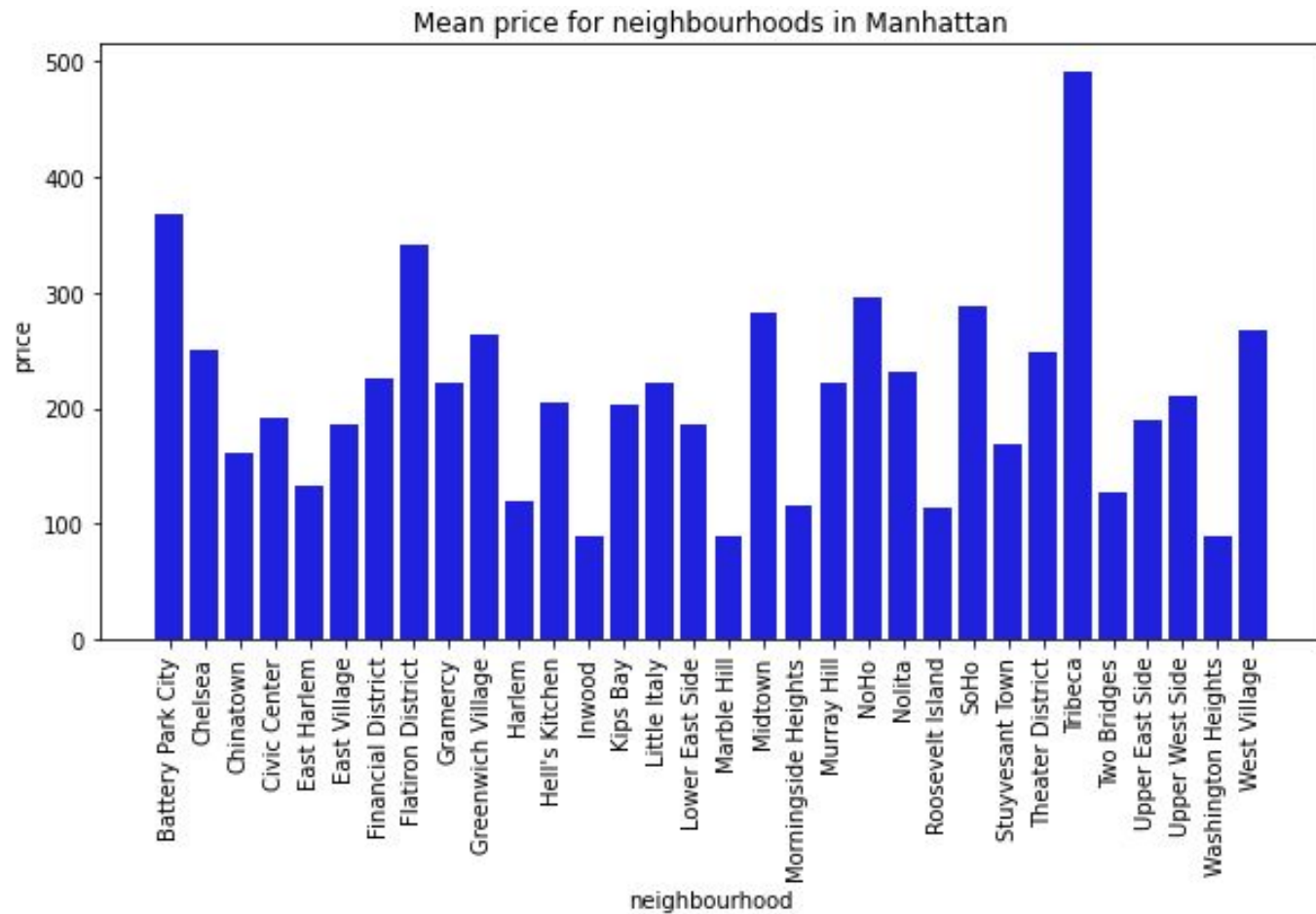
```
array(['Manhattan'], dtype=object)
```

```
most_successful_host['room_type'].unique()
```

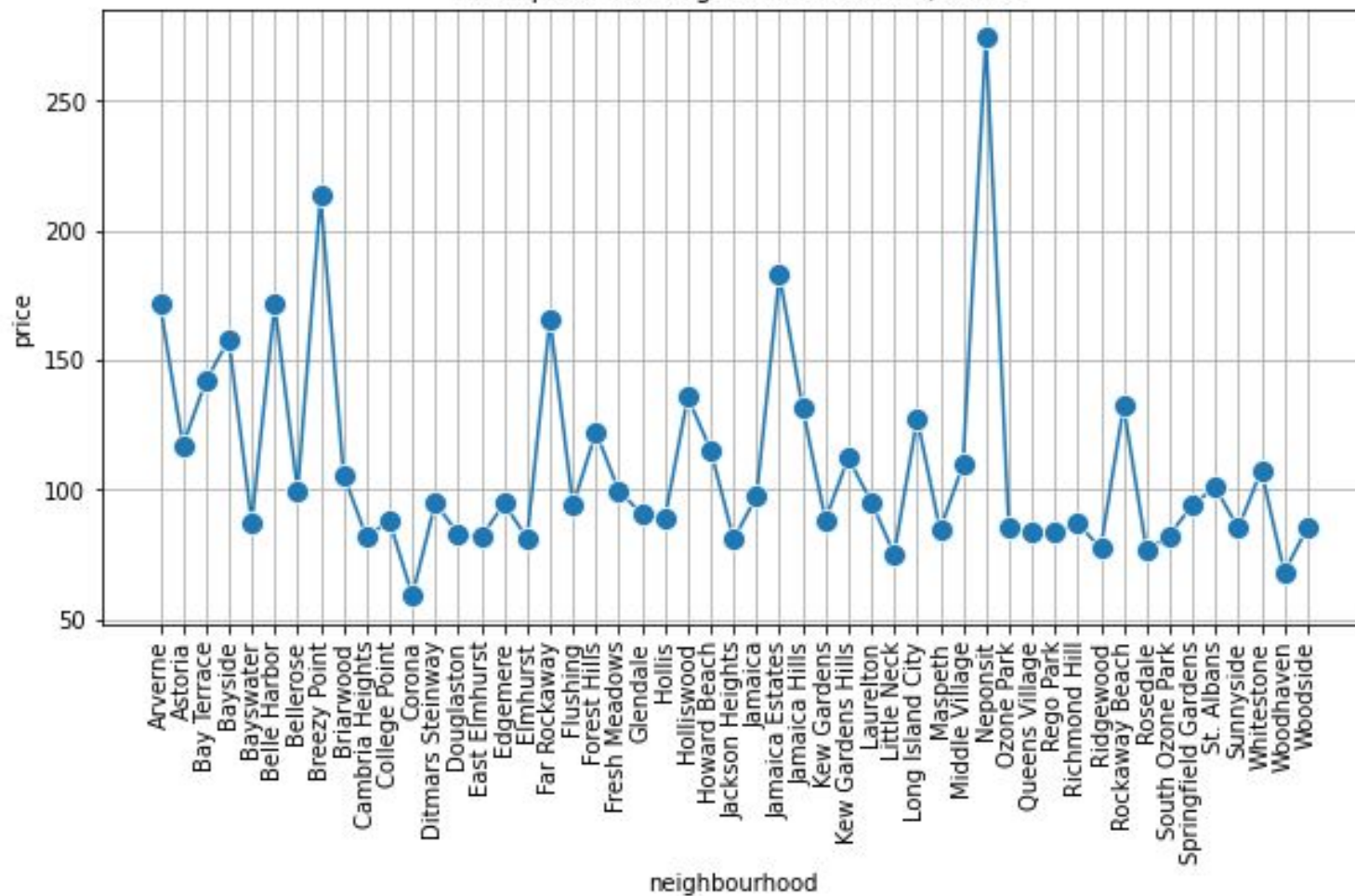
```
array(['Entire home/apt', 'Private room'], dtype=object)
```

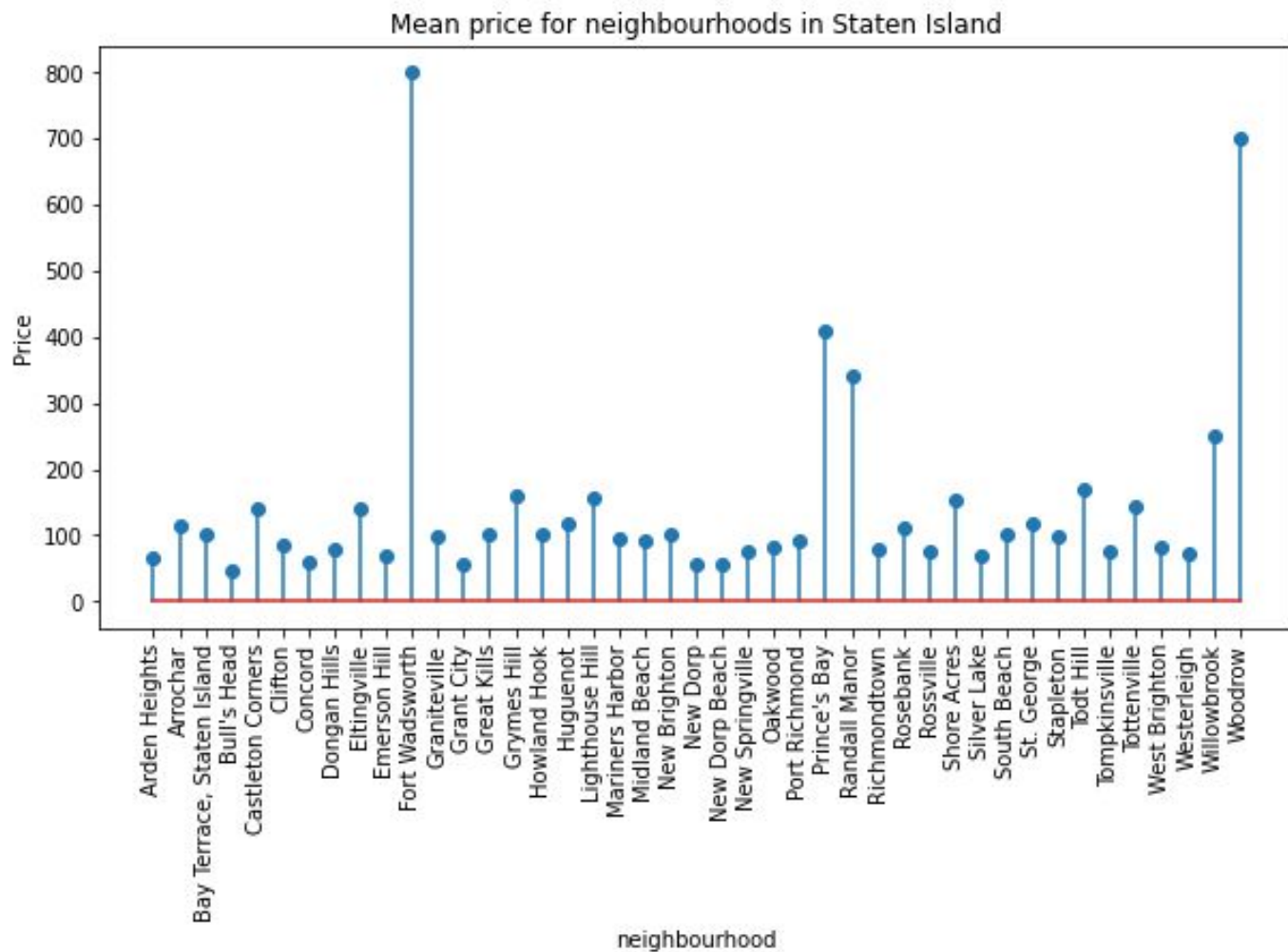
# Most expensive neighborhoods





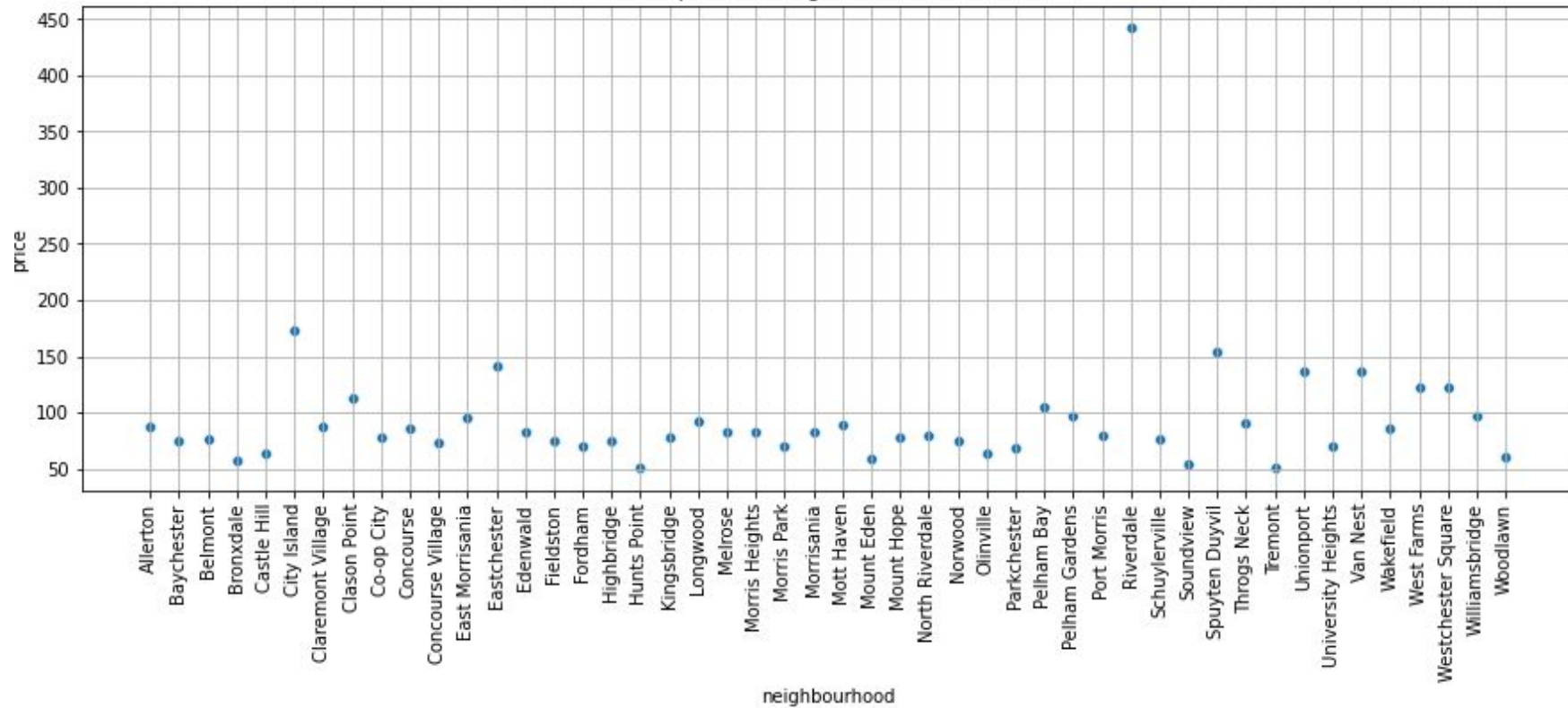
Mean price for neighbourhoods in Queens







Mean price for neighbourhoods in Bronx



# Conclusion

1. Entire home/apt is the most expensive and yet get the most traffic.
2. Private room is second highest in terms of booking which suggests people value their privacy.
3. Manhattan is the most expensive Neighbourhood group and Brooklyn gets the most traffic.
4. Price have a negative correlation with availability.
5. Sonder(NYC) is the most successful host, who only caters in Manhattan and only lists apartments and private rooms.
6. Most expensive neighbourhoods-
  - The most expensive neighbourhood in Brooklyn is Sea Gate.
  - The most expensive neighbourhood in Manhattan is Tribeca.
  - The most expensive neighbourhood in Queens is Neponsit.
  - The most expensive neighbourhood in Staten Island is Fort Wadsworth.
  - The most expensive neighbourhood in Bronx is Riverdale.