

# NYC Airbnb Analysis

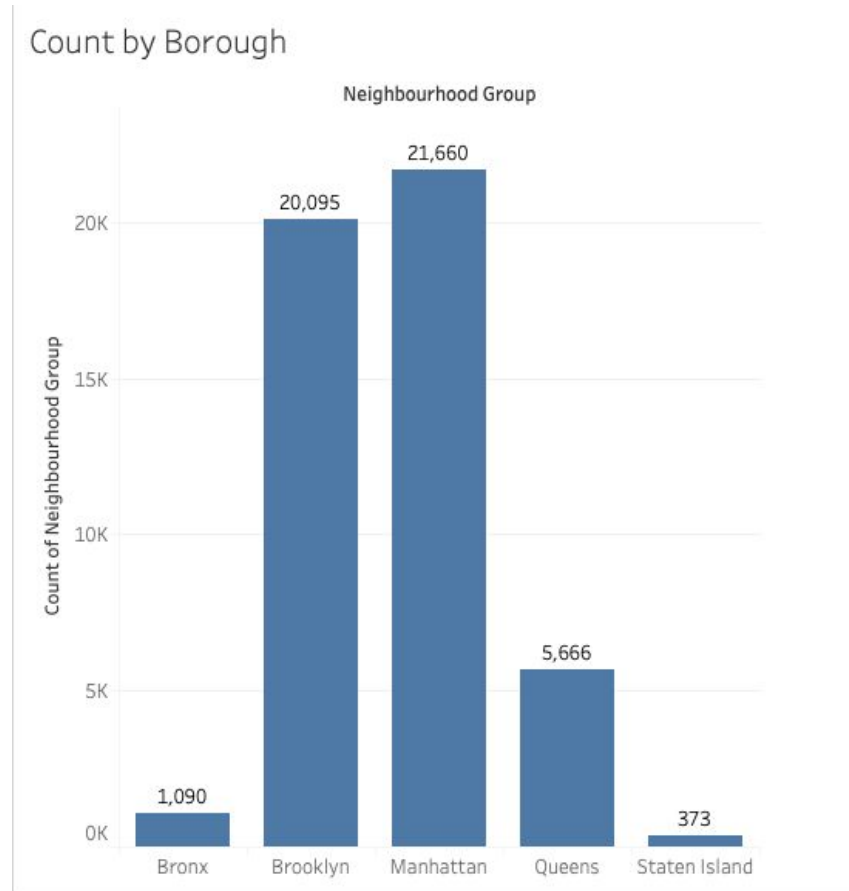


Angelyn Arthur

# NYC Airbnb Dataset:

- 48,895 records
- 2011 - 2019
- All 5 boroughs included
- Renting options: Private room, Entire home/apartment, shared room

Which borough utilized Airbnb services the least?



# Hypothesis #1: People used Airbnb the least in Staten Island due to having a high price on average.

- ▶ Null hypothesis: Staten Island price average  $\geq$  \$150
- ▶ Alternative hypothesis: Staten Island price average  $<$  \$150

*Insights:* The p-value (0.007) was less than the significance level (0.1)

- The null hypothesis is rejected

Despite Staten Island having a significantly lower amount of people using Airbnb in this dataset did not mean their price range was significantly higher than the other boroughs.

## Hypothesis #2: The Bronx had a lower price on average due to the borough's perception.

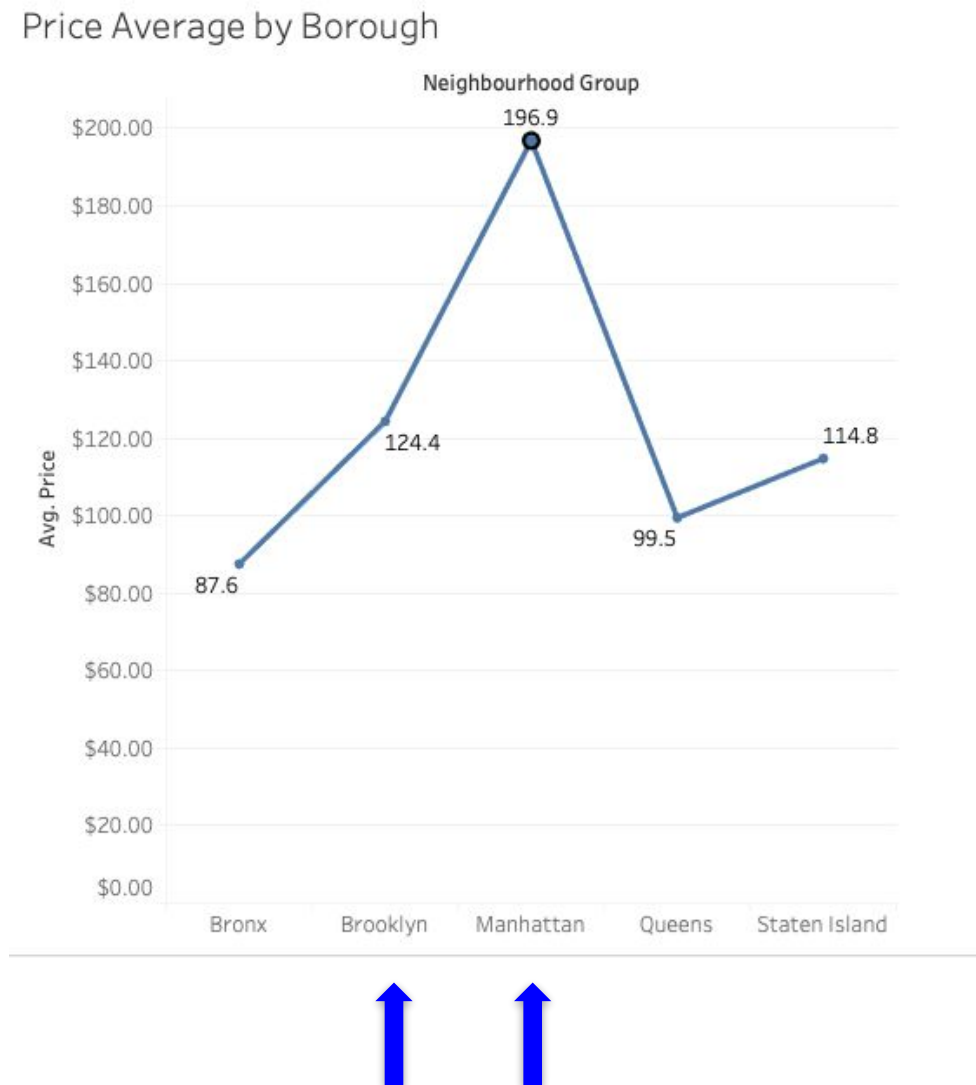
- ▶ Null hypothesis: The Bronx price average  $\leq$  \$100
- ▶ Alternative hypothesis: The Bronx price average  $>$  100

*Insights:* The p-value (1) was greater than the significance level (0.05)

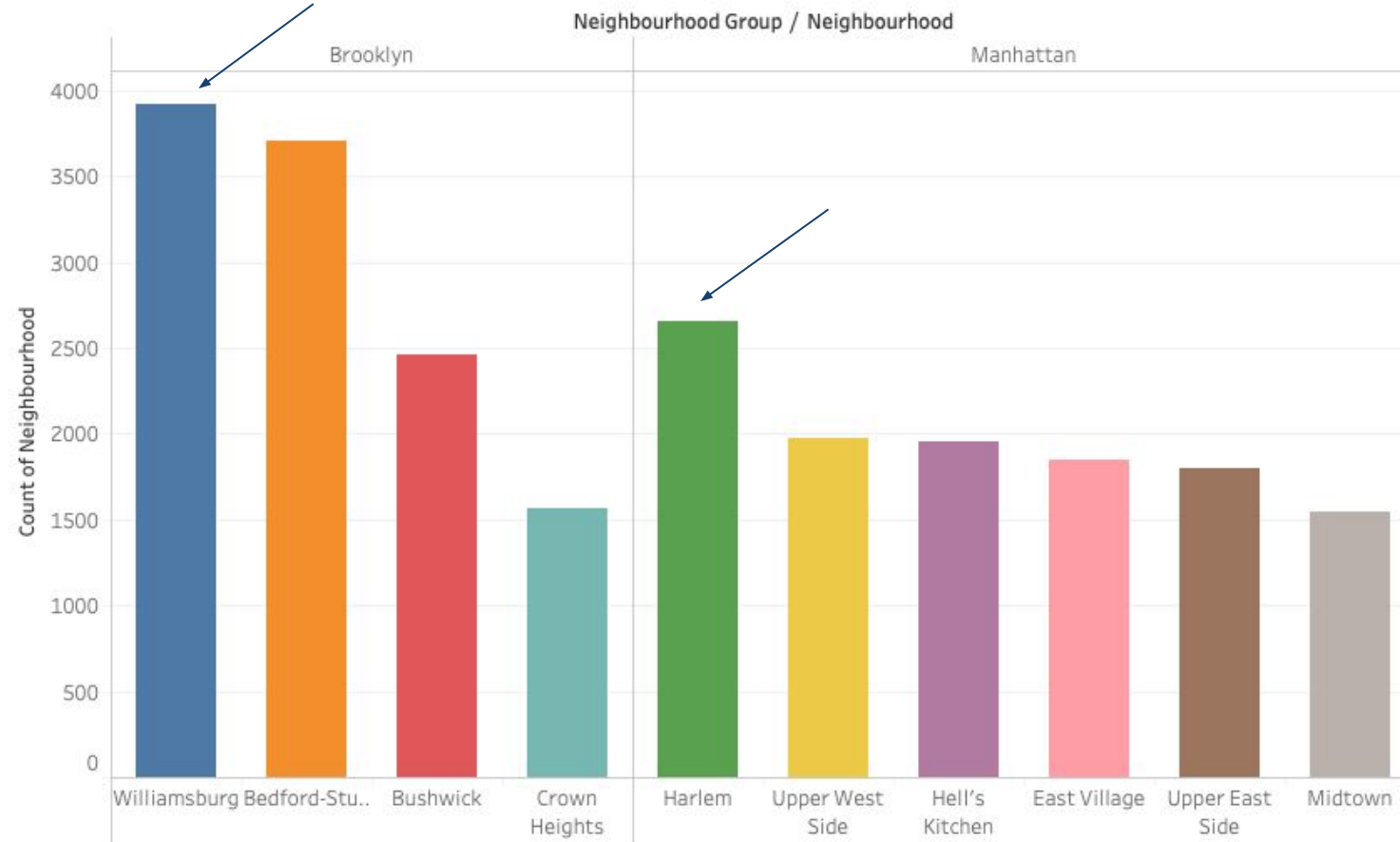
- Fail to reject the null hypothesis

It is true that the Bronx had a price average equal to or less than \$100.

Which two boroughs  
had the highest price  
average?



Top 10 Airbnb Neighborhoods



Emphasis on the top neighborhood in Brooklyn and the top neighborhood in Manhattan

# Williamsburg vs Harlem

- ▶ Null hypothesis: No significant difference between Williamsburg and Harlem
- ▶ Alternative hypothesis: A significant difference between Williamsburg and Harlem

Insights: p-value ( $\sim 0$ ) is less than the significance level (0.1)

- The null hypothesis is rejected

There was a significant difference on average between Williamsburg and Harlem.

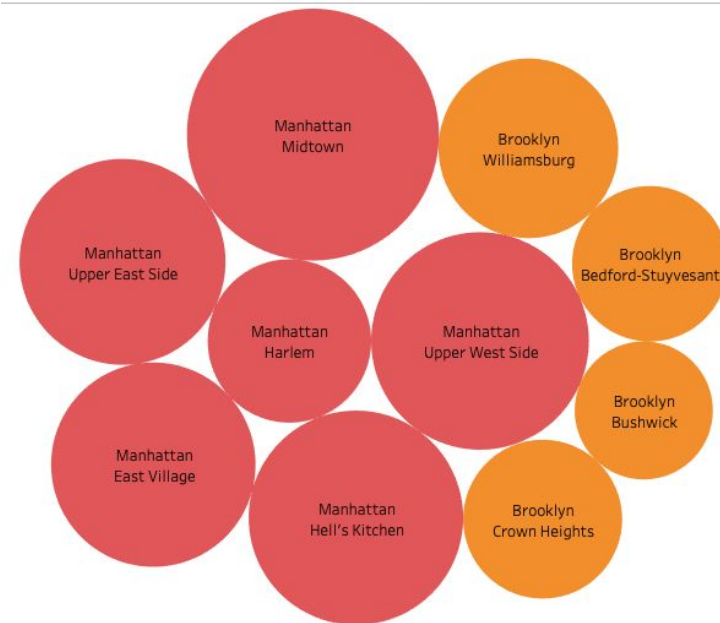


How do the top 10 neighborhoods in Manhattan and Brooklyn compare?

Neighbourhood	Neighbourhood Group	Avg. Price	Count of Neighbourhood ▼
Williamsburg	Brooklyn	143.839	3,919
Bedford-Stuyvesant	Brooklyn	107.794	3,710
Harlem	Manhattan	118.974	2,658
Bushwick	Brooklyn	84.904	2,462
Upper West Side	Manhattan	210.918	1,971
Hell's Kitchen	Manhattan	204.794	1,958
East Village	Manhattan	186.083	1,853
Upper East Side	Manhattan	188.948	1,798
Crown Heights	Brooklyn	112.480	1,564
Midtown	Manhattan	282.719	1,545

While people used Airbnb services in Williamsburg and Harlem the most in these two boroughs, people were willing to spend a significant \$25 more on average per night in Williamsburg than in Harlem.

Average Price Manhattan vs Brooklyn



Despite Harlem being the most frequented neighborhood in Manhattan, Harlem had the lowest average price. In contrast, Williamsburg was the most frequented neighborhood in Brooklyn and also had the highest average price per night.