

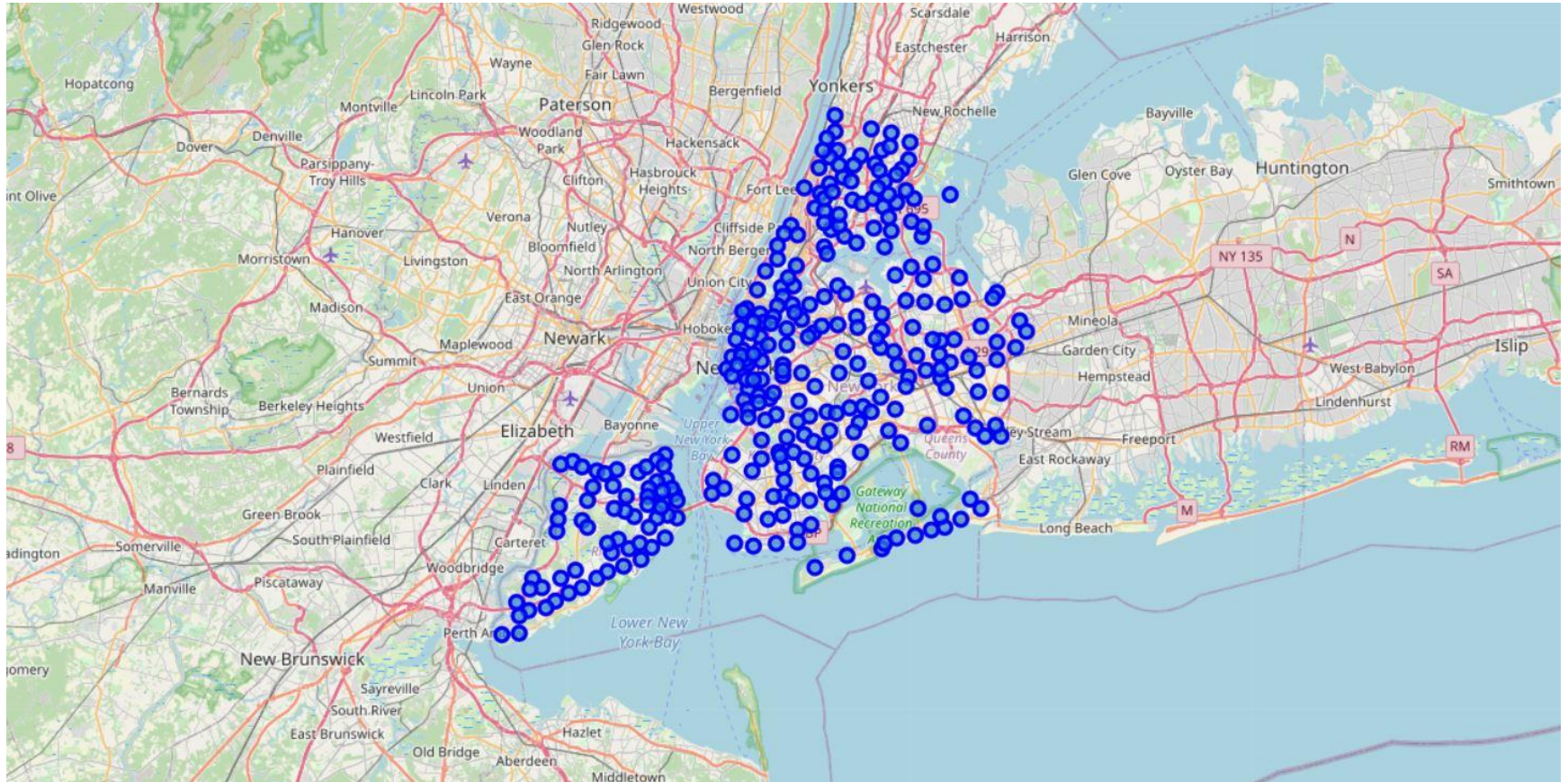
An aerial photograph of Lower Manhattan, New York City. The Freedom Tower stands prominently on the left side of the image. The city is densely packed with skyscrapers and buildings. The Hudson River is visible on the left, and the East River is on the right. The text "Capstone Project – The battle of Neighborhoods" is overlaid in large, bold, black font across the center of the image.

# Capstone Project – The battle of Neighborhoods

Invest a property in New York



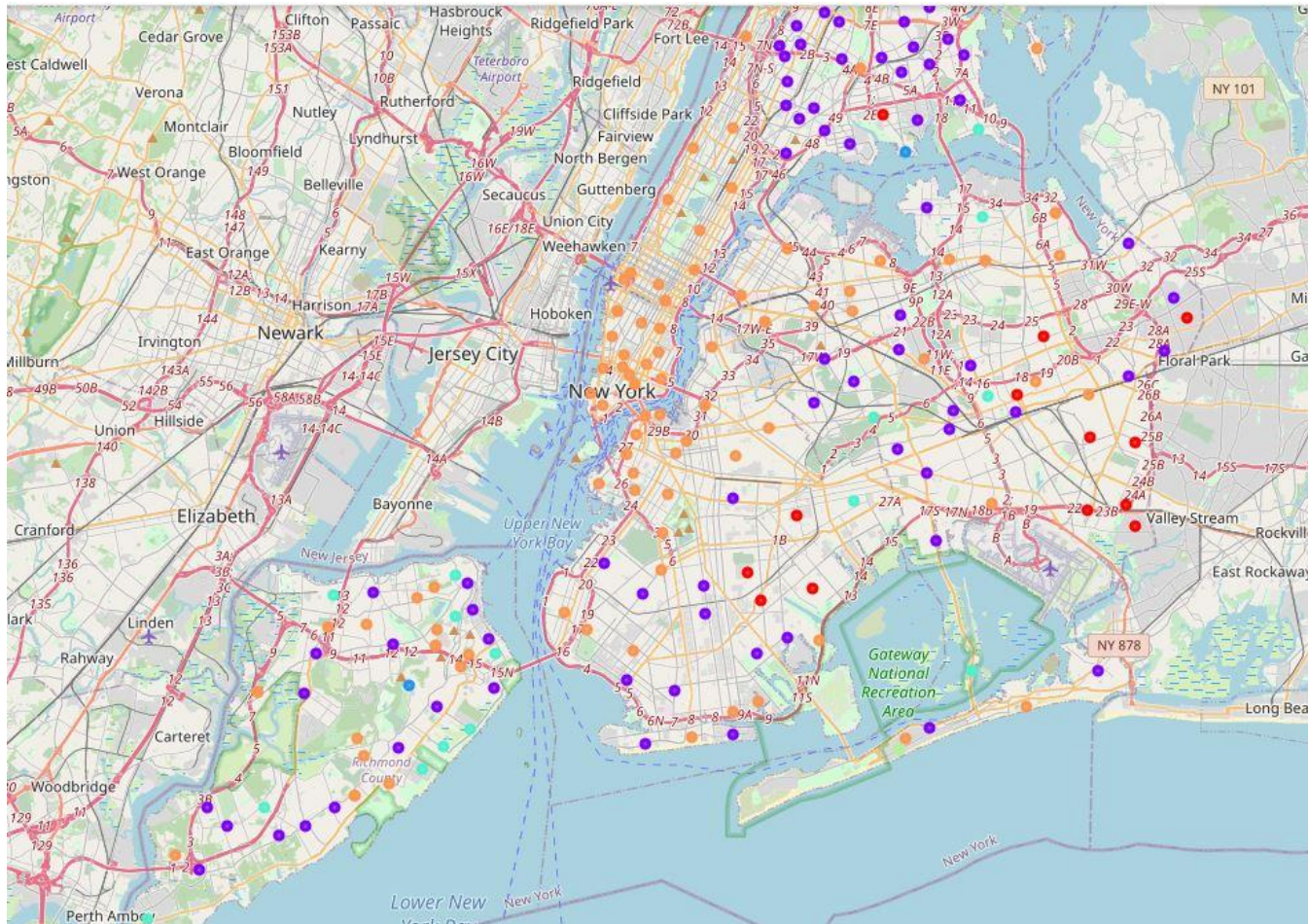
# Neighborhoods in New York City



There are 5 boroughs and 306 neighborhoods in New York City.

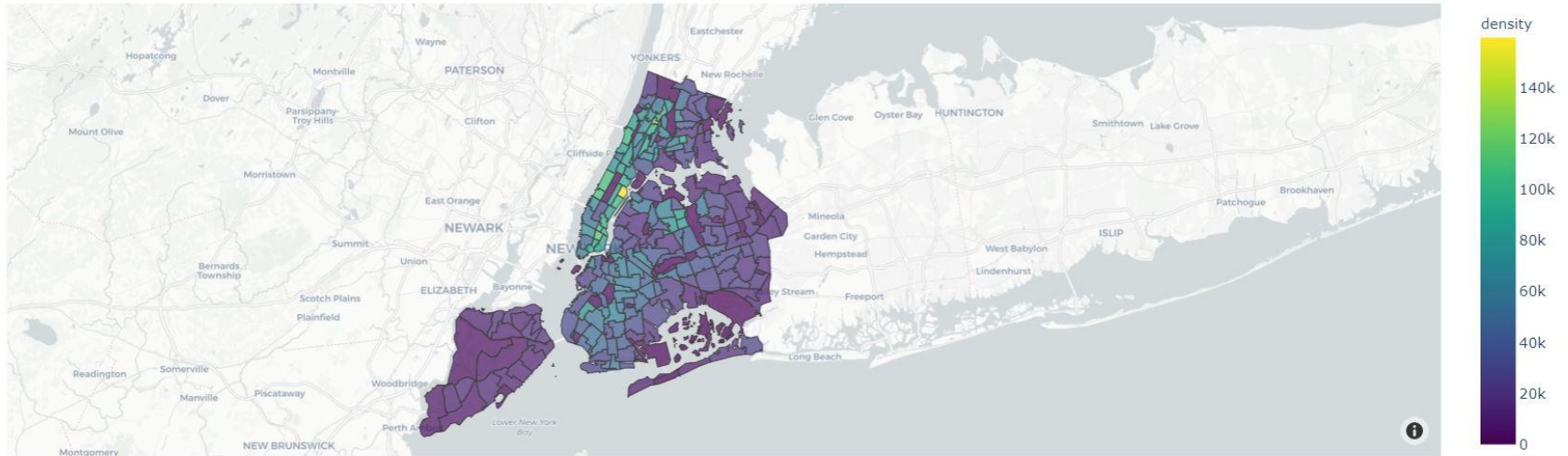


# Clusters of neighborhoods

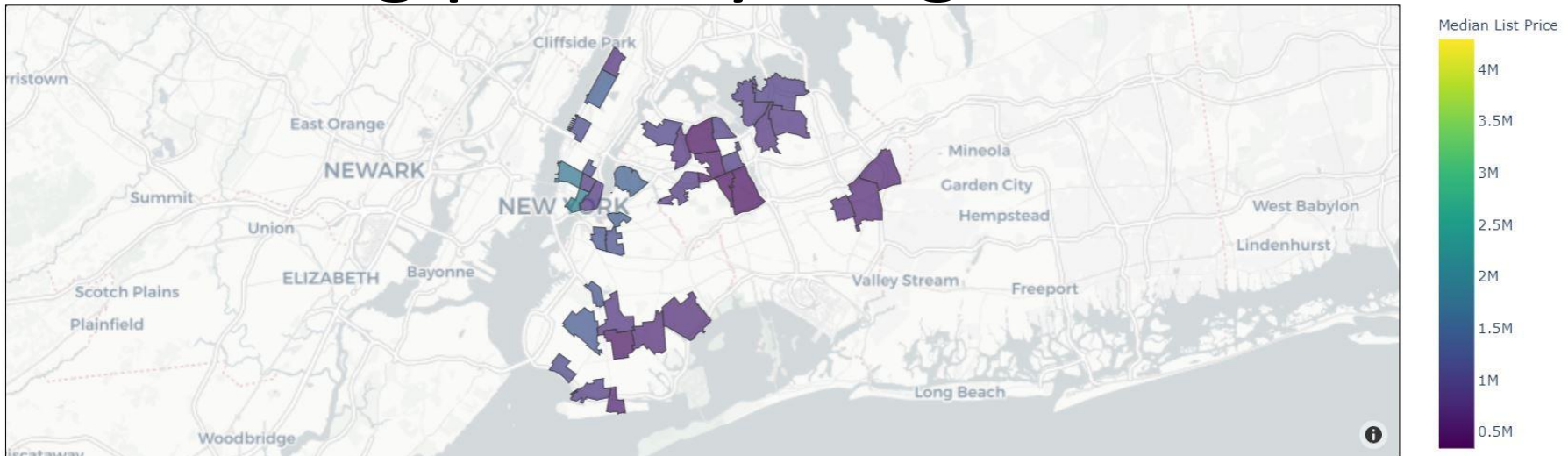


K-means algorithm with optimal k of 6 is applied as the cluster method of unsupervised learning.

# Population density by neighborhoods



# Housing price by neighborhoods



Due to lack of complete housing price data, the comparison between the population density and the housing price is ineffective.

# Conclusion

- In light of most common venues within the neighborhood, restaurants, train stations are most common in cluster 6 with the highest price level. It is comprehensive that the convenience of the neighborhood has a positive relationship with the housing price.
- There are many factors that impact the housing price. Besides the analysis of venues within the neighborhood, other factor like comparable house price nearby, new infrastructure development plan shall be taken into account. The more data we got, the more reliable analysis we could made.