Comparison of New York Boroughs and the impact on outbreak of COVID 19
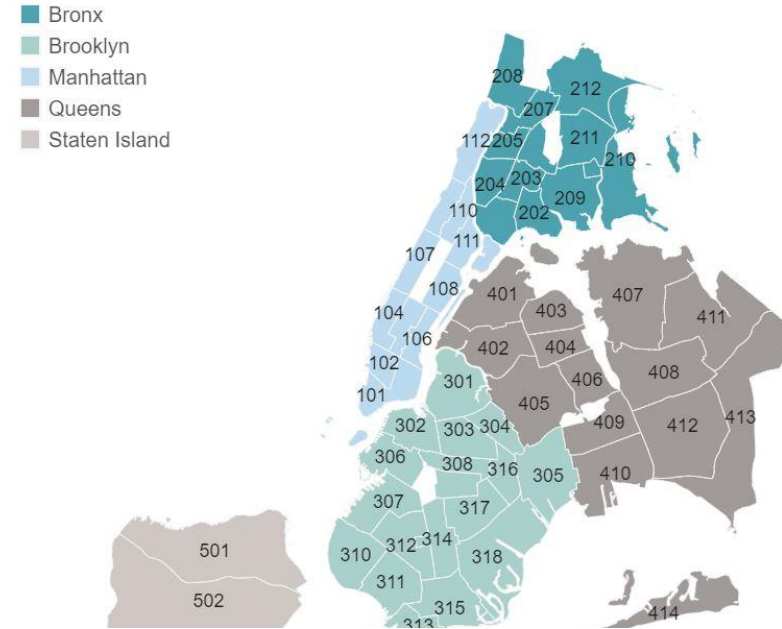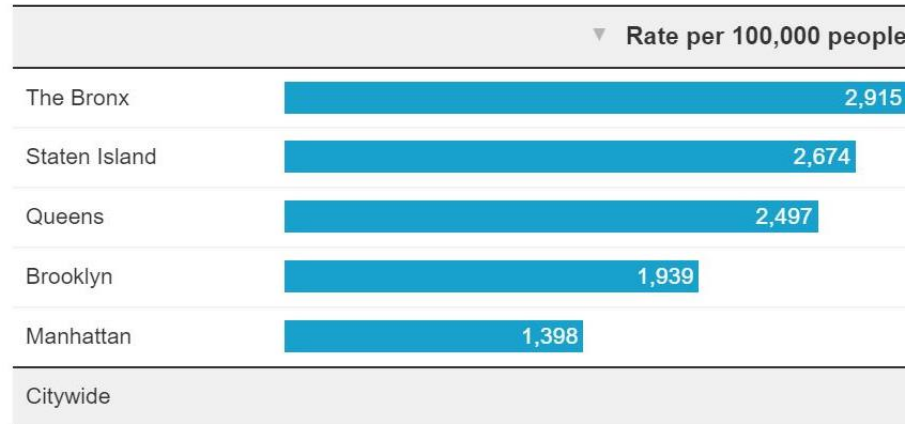
By Usama Tariq

Introduction

- 4 million people affected by COVID 19 almost 300k deaths worldwide.

- In the absence of vaccine prevention is essential through social distancing.

- 35% of the COVID 19 cases reported in USA are in New York.

NY COVID 19 Cases - Overview

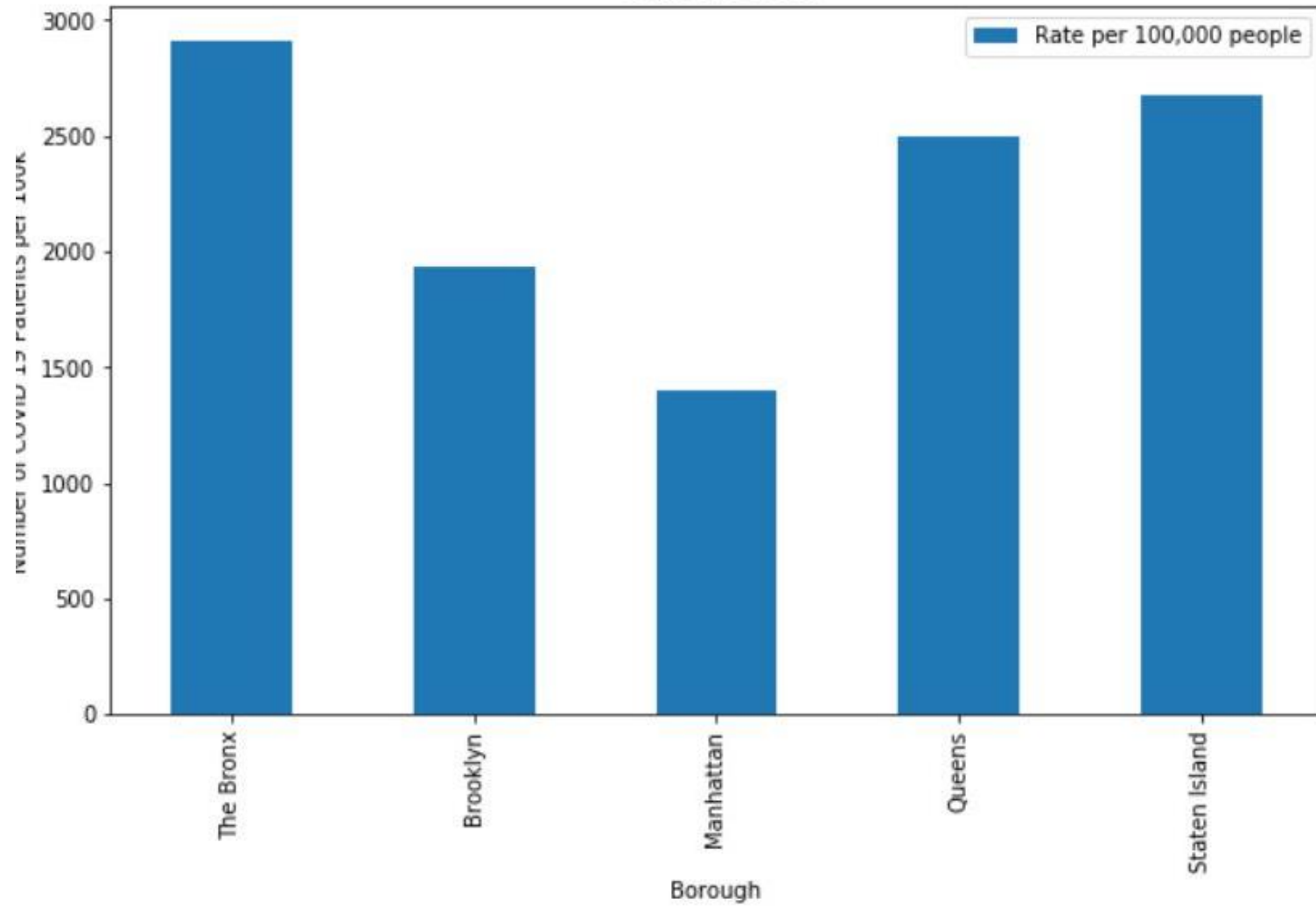Source: NYC Department of Health and Mental Hygiene

Data Acquisition

- NY JSON file available in week 3 assignment of Coursera Capstone.

- COVID 19 cases in New York Boroughs table downloaded from NYC Department of Health and Mental Hygiene.

- NY GEOJSON file to plot neighborhoods on folium acquired from GITHUB.

Methodology

- Identification of COVID 19 boroughs in New York with highest and lowest number.

- Venues identified near the neighborhoods of these boroughs and categorized using Foursquare API

- Application of K-Means clustering to segregate the data based on the 3 most common venues in these neighborhoods.

- Data visualization using folium map library and GEOJSON file acquired from GITHUB.
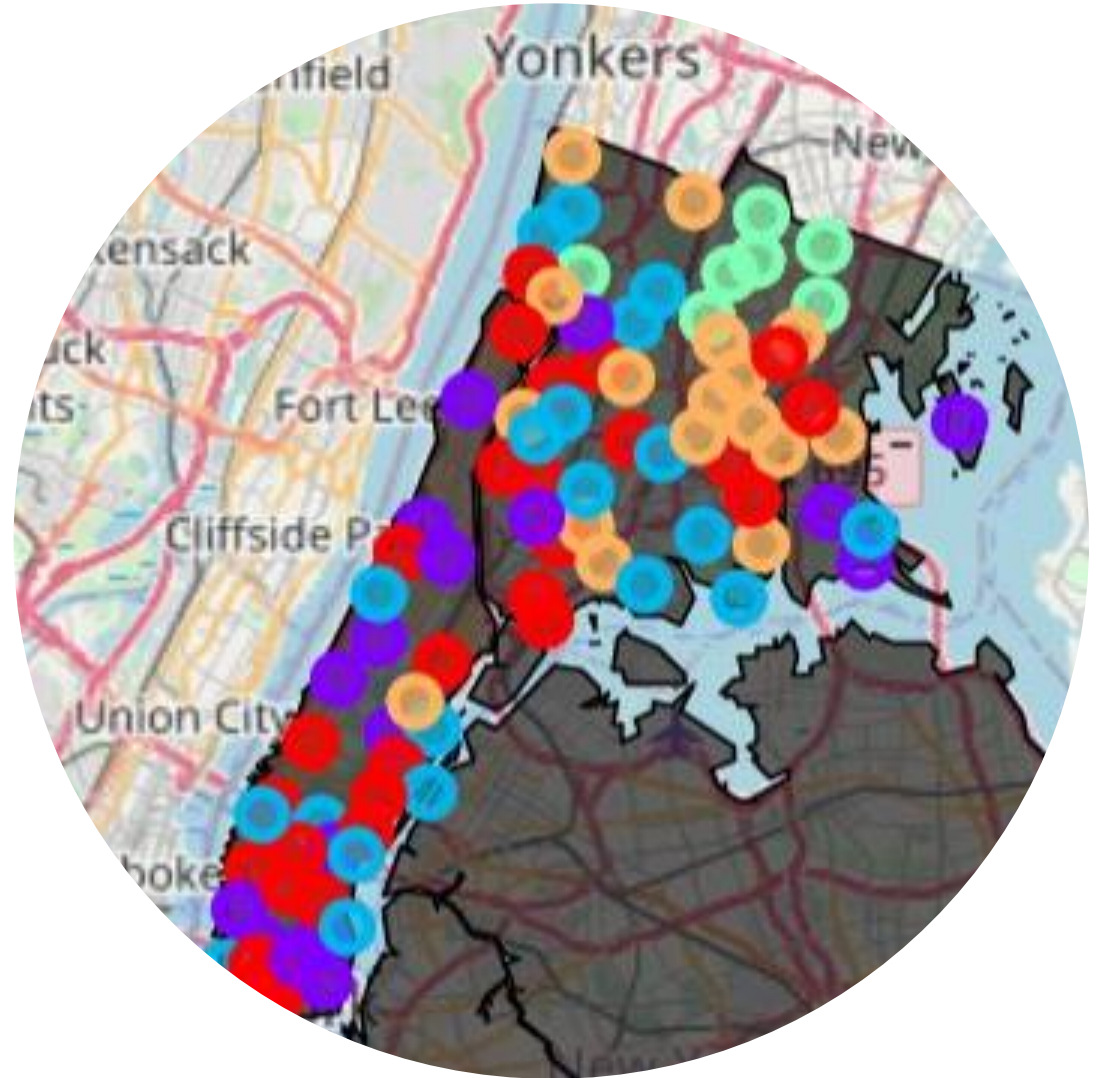
Identification of Boroughs

Results

- Cluster 1 = Red
- Cluster 2 = Purple
- Cluster 3 = Blue
- Cluster 4 = Sea Green
- Cluster 5 = Orange

Discussion

- Cluster 4 identified as the outlier.

- Analysis revealed Parks and Plazas as hotspots for the virus spread.

- Areas closet to Parks and Plazas most are most exposed to COVID 19 spread.

- Evidence based policy design by Governments to minimize the spread of COVID 19.

Conclusion

- Spread of COVID 19 may be contained by closing doing Parks and Plazas.
- People living near these areas should also be isolated so that the virus is not spread in the entire region.
- Limited scope of the analysis due to API call restrictions by Foursquare.
- Other factors like behavior of people may also impact the spread of COVID 19.

Thank You