Choosing the safest place to live

Analysis of COIVD-19 infection rates in the New York neighborhood
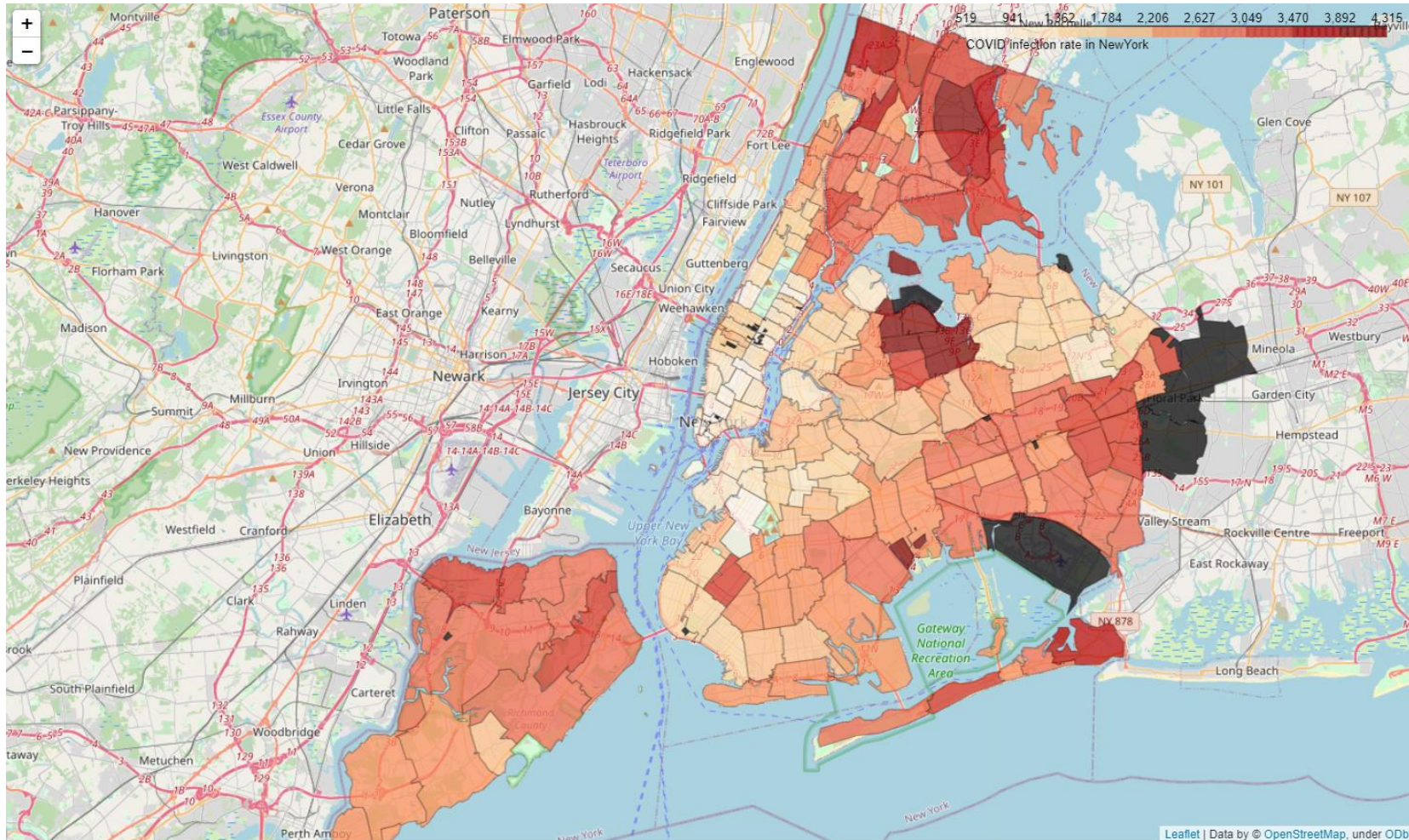
Chosing the best neighborhood to survive the pandemic

- Pandemic outbrake has hit the world badly

- US number of cases reported daily is not getting down and situation remains critical

- Different neighborhoods of the New York City are affected at a different scale

- It would be important also to predict hot spots in other cities as well

Data acquisiton and cleaning
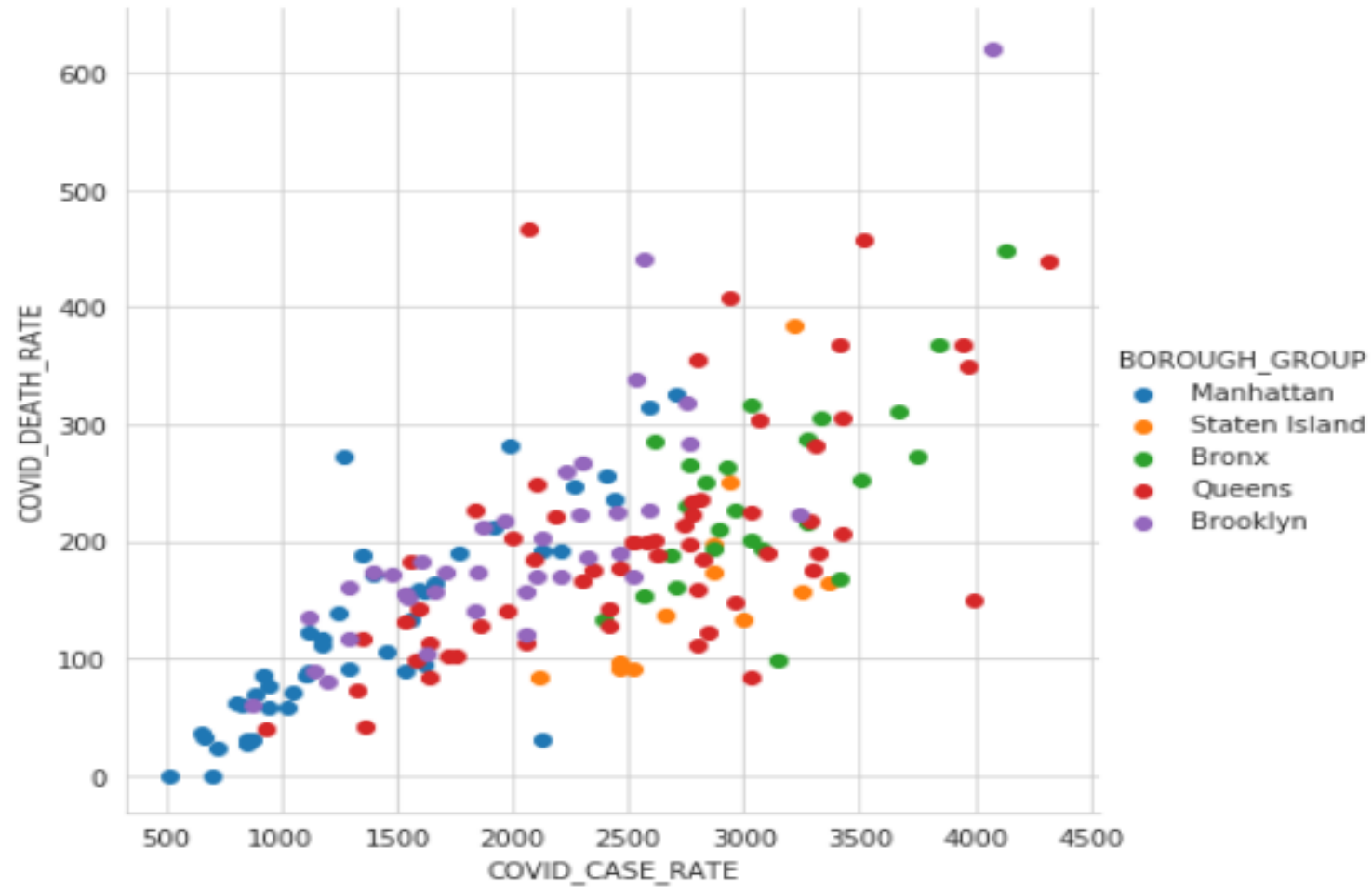
▶ COVID cases per New York City Zip code used

▶ Data enhanced with the venues from Foursquare API

▶ For displaying on map also respective GeoJSON file for NYC taken

▶ Major data cleaning was required due to the different formats in neighborhood names and instability of geocoding on OSM
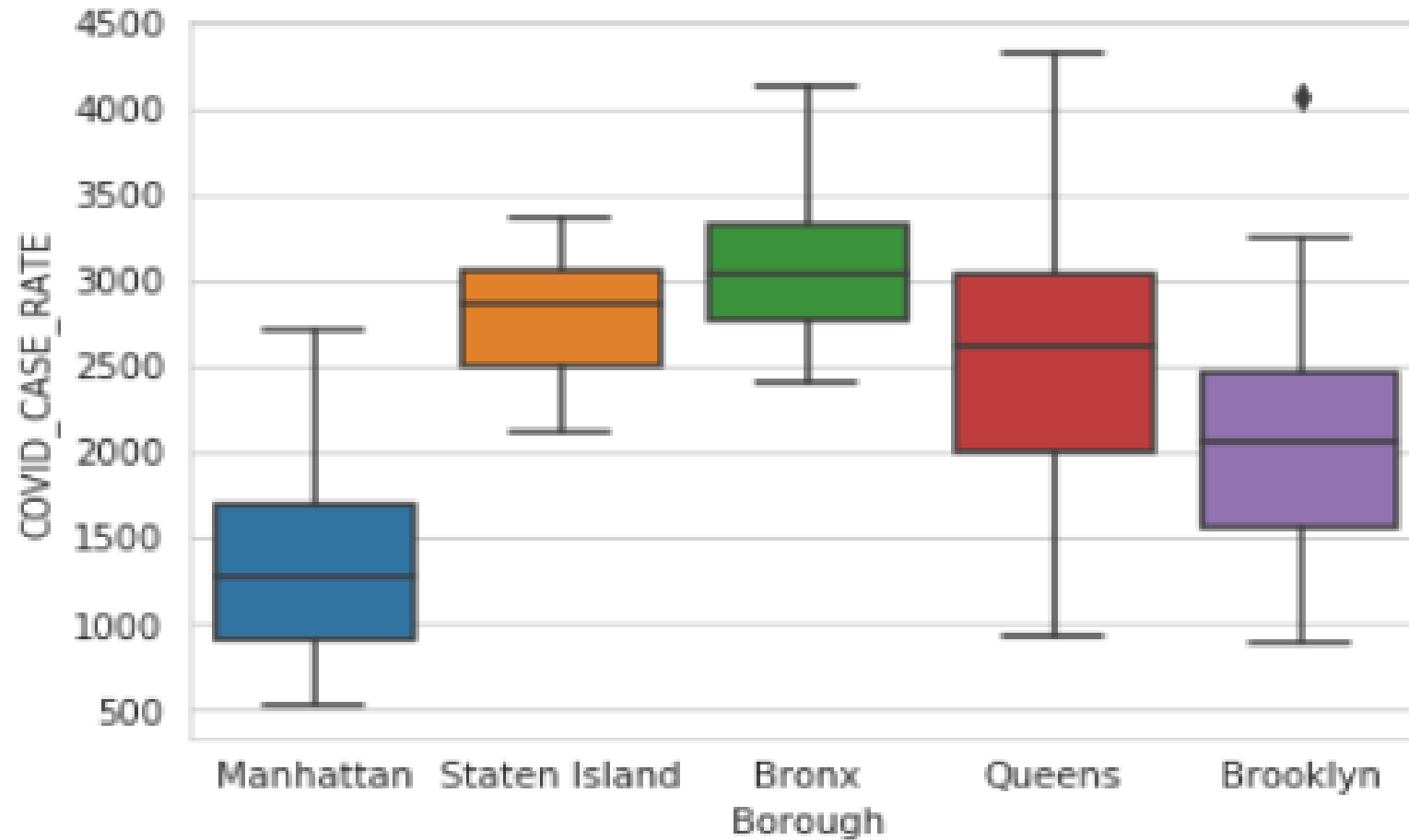
COVID infection rates in NYC
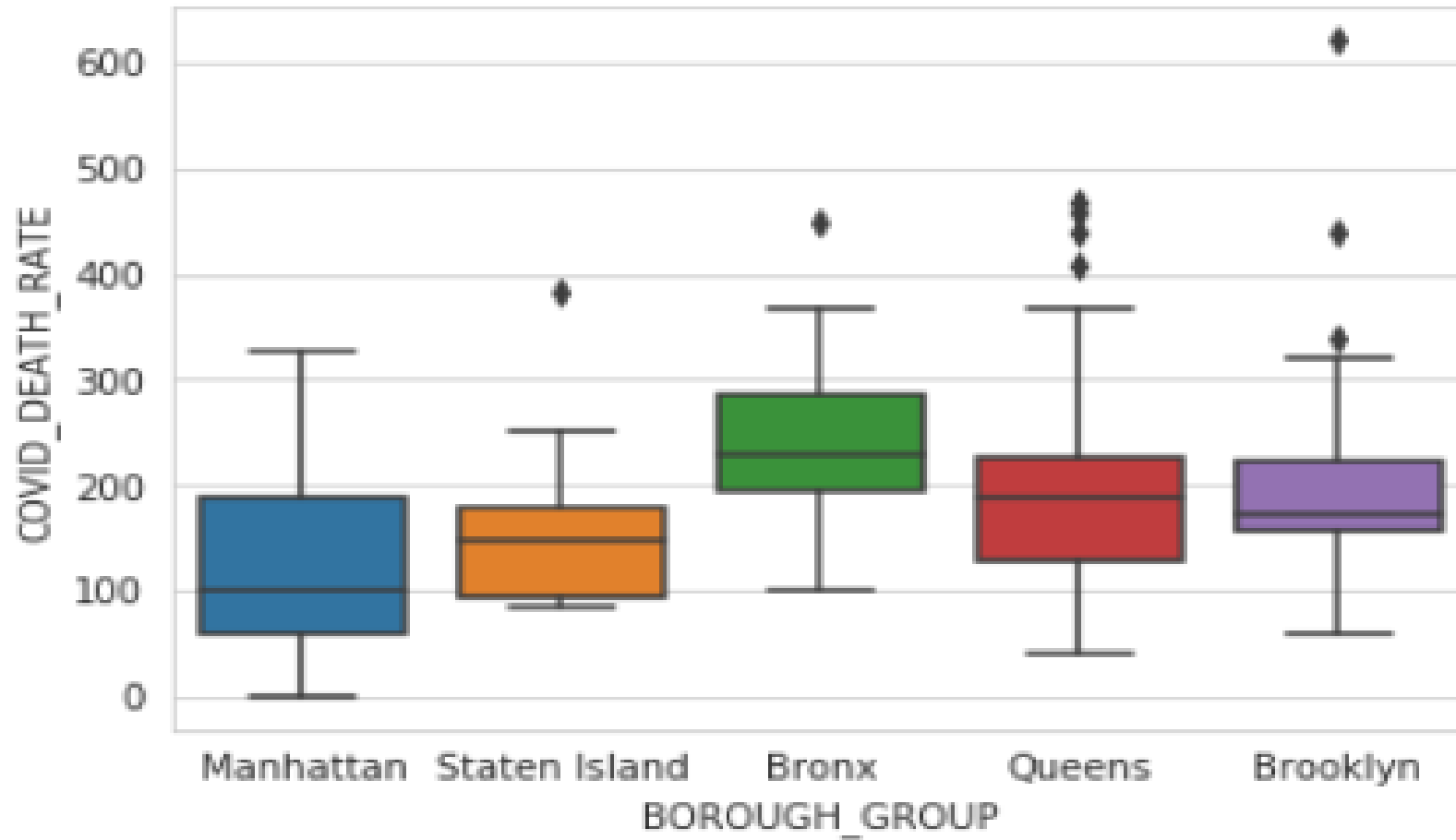
COVID death rates in NYC
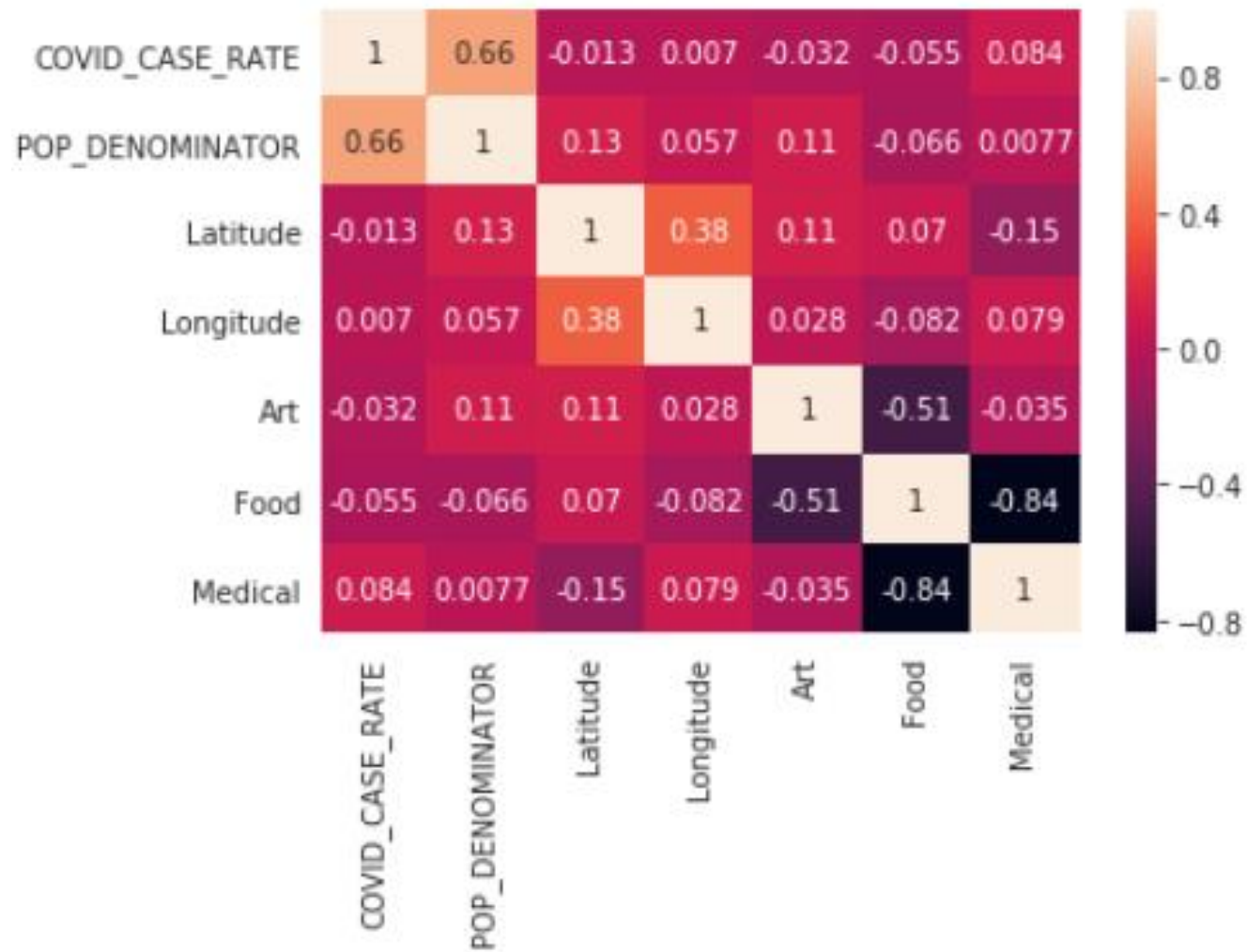
Infection rate vs. death rate

COVID cases per neighborhood

COVID death rate per neighborhood

Correlation matrix

Regression confirms no link

```
LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None,
        normalize=False)
Mean Absolute Error: 11.785929590247573
Mean Squared Error: 218.7551994831311
Root Mean Squared Error: 14.79037523131678
R2 score: 0.00798079513546 3903
```

Conclusion and future work

- Best place to live in New York is in Manhattan

- No link identified between places where people are gathering or availability of medical centers and the infection rates

- Next step here would be to analyze at the finer grained level the different venue category availability and compare the data from New York with similar neighborhoods in the other cities