New York park venues that should be avoided
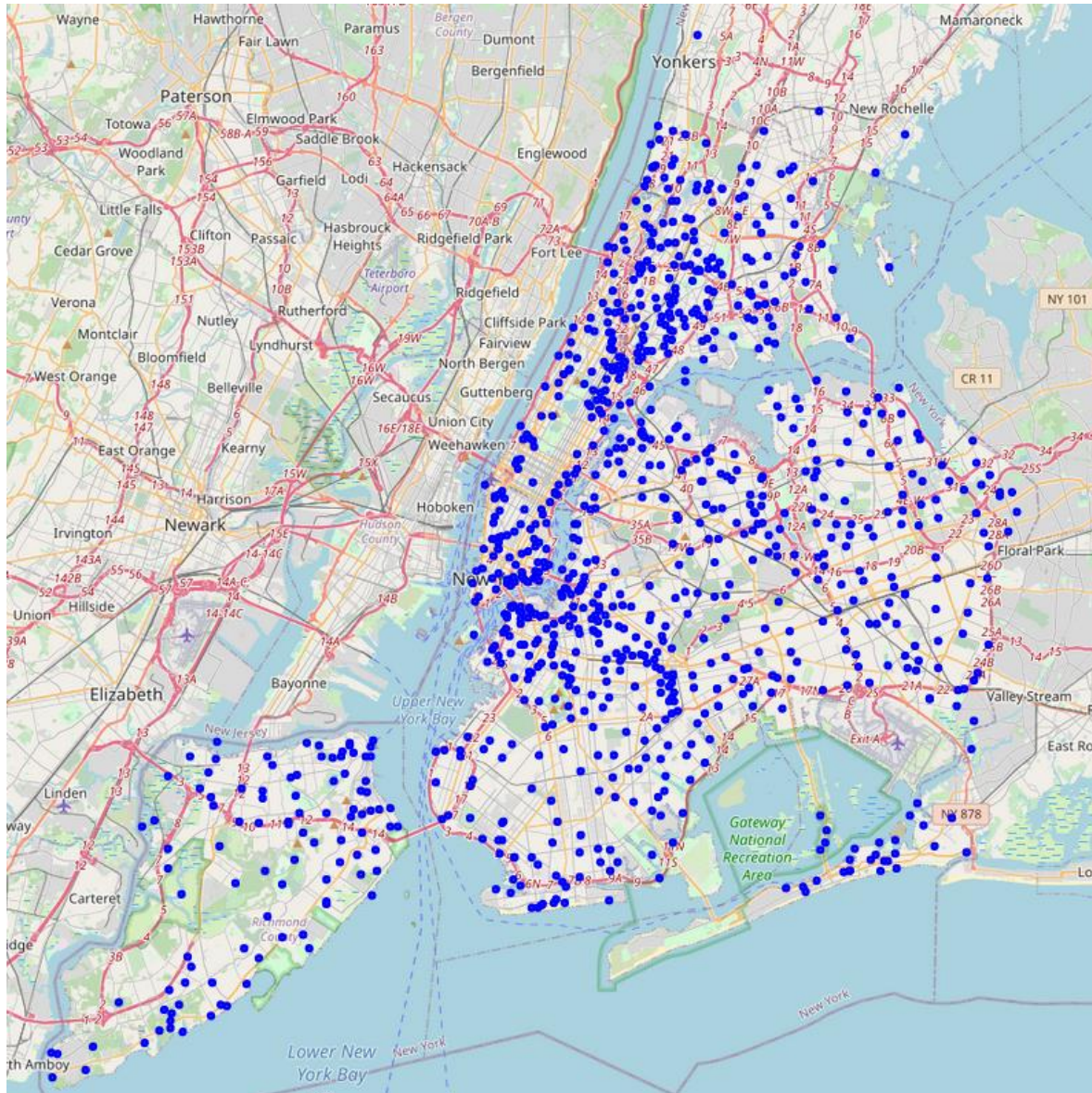
Author: XYZ

Motivation of research

- New York city is visited by approximately 40 million tourists from all over the world

- A very important part of the tour is ensuring yourself and your loved one's safety while watching places that attract attention

- Data analysis with machine learning can mark park area with higher risk

Data acquisition

- Police statistics of the number of crimes committed in parks and playgrounds throughout the city from 2015 to 2020 with interval of 4 month
  https://www1.nyc.gov/site/nypd/stats/crime-statistics/park-crime-stats.page

- Using the **geopy** package to determine the geographic coordinates of all parks

- Using Folium package to render map of NY city

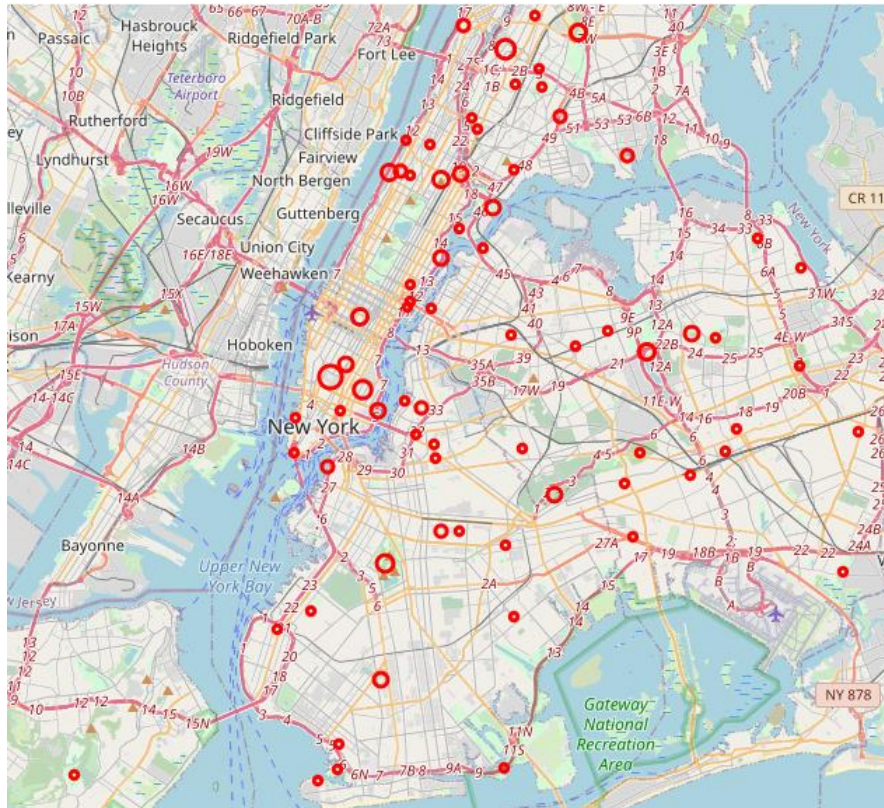- Information of venues and their location was required from Foursquare server
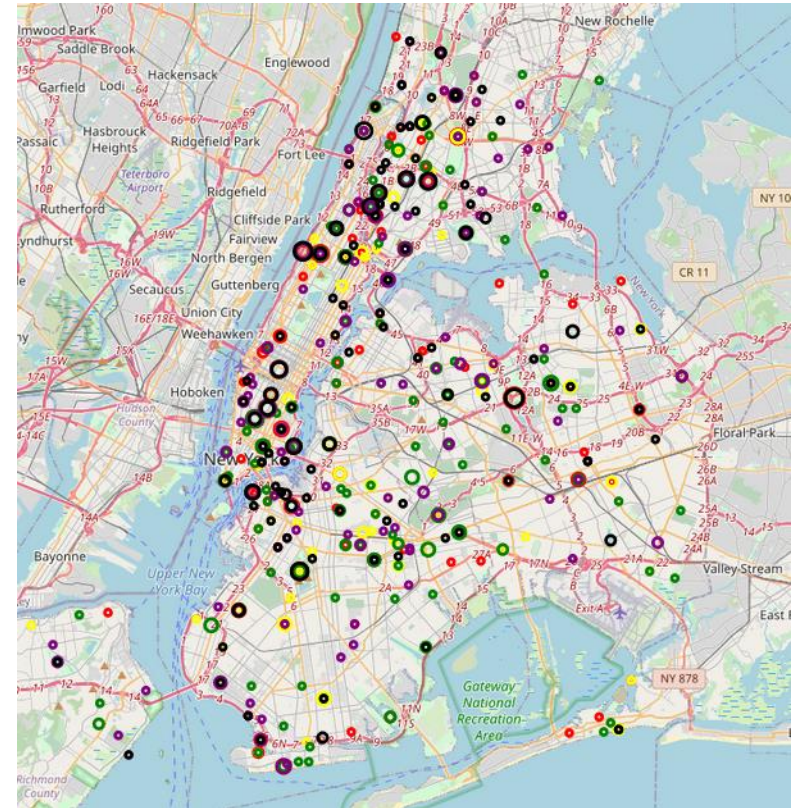
NY parks and playgrounds

For analysis we have
967
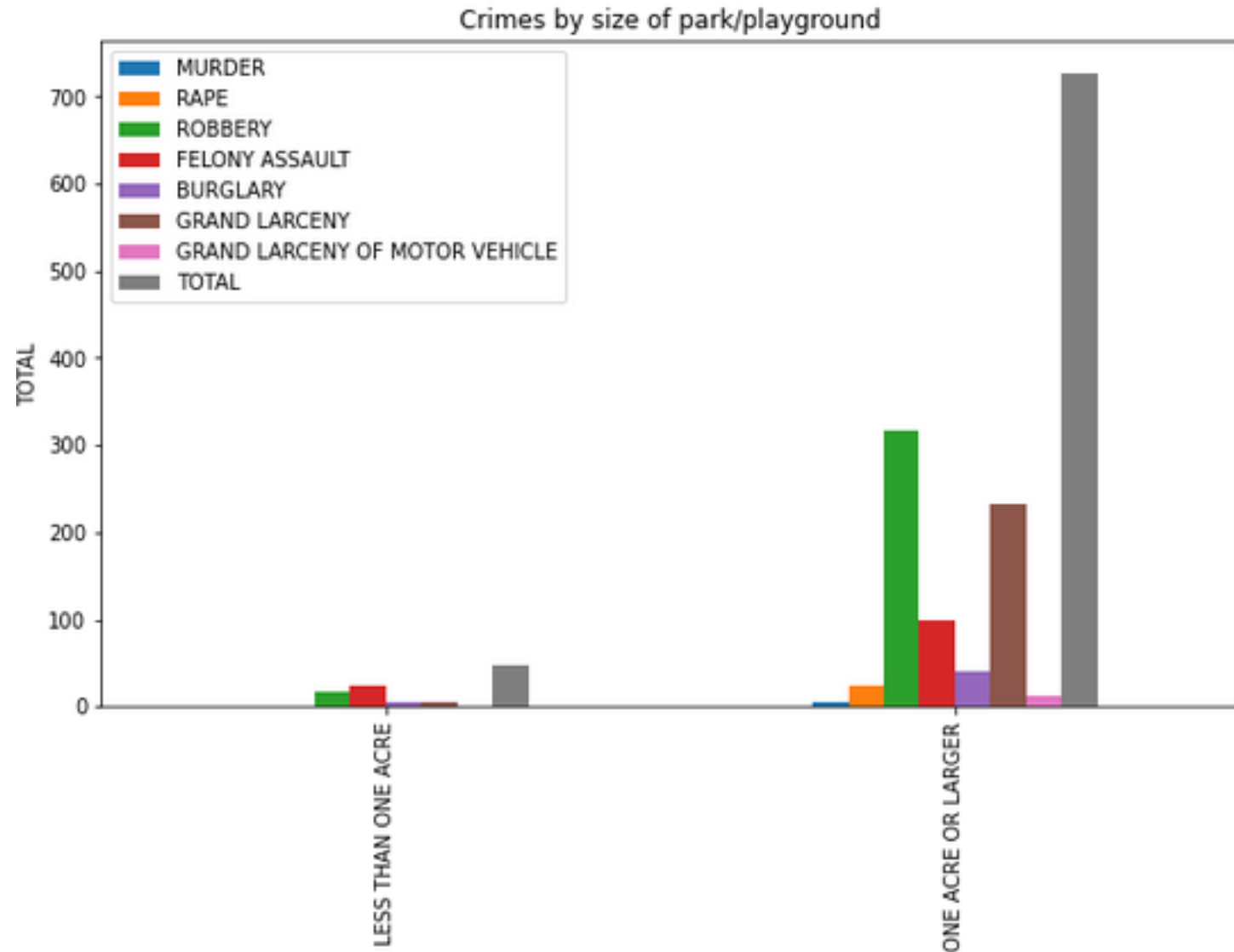parks and playgrounds

Crimes location in the from 2015 to 2020

2020

2015 - 2019

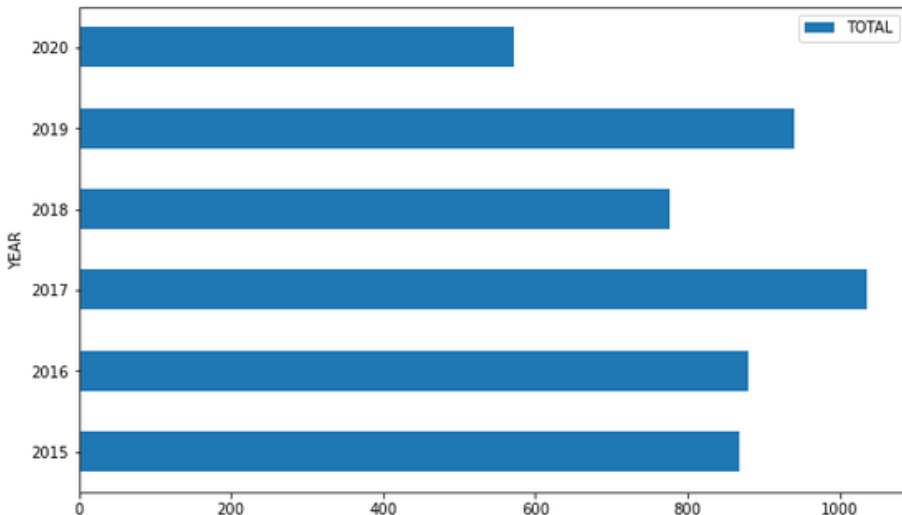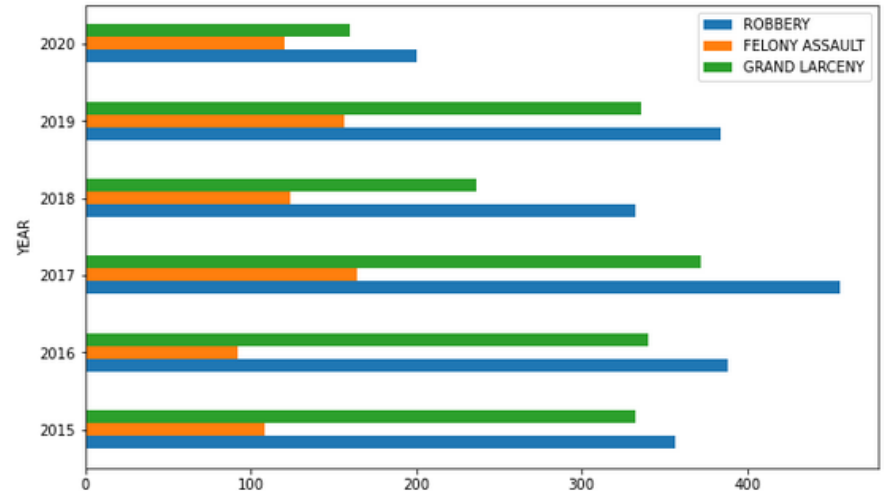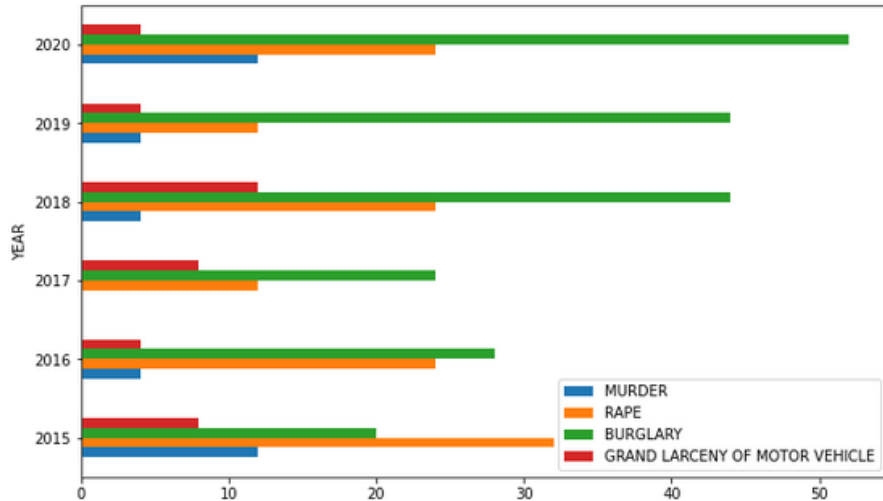# Size does matter
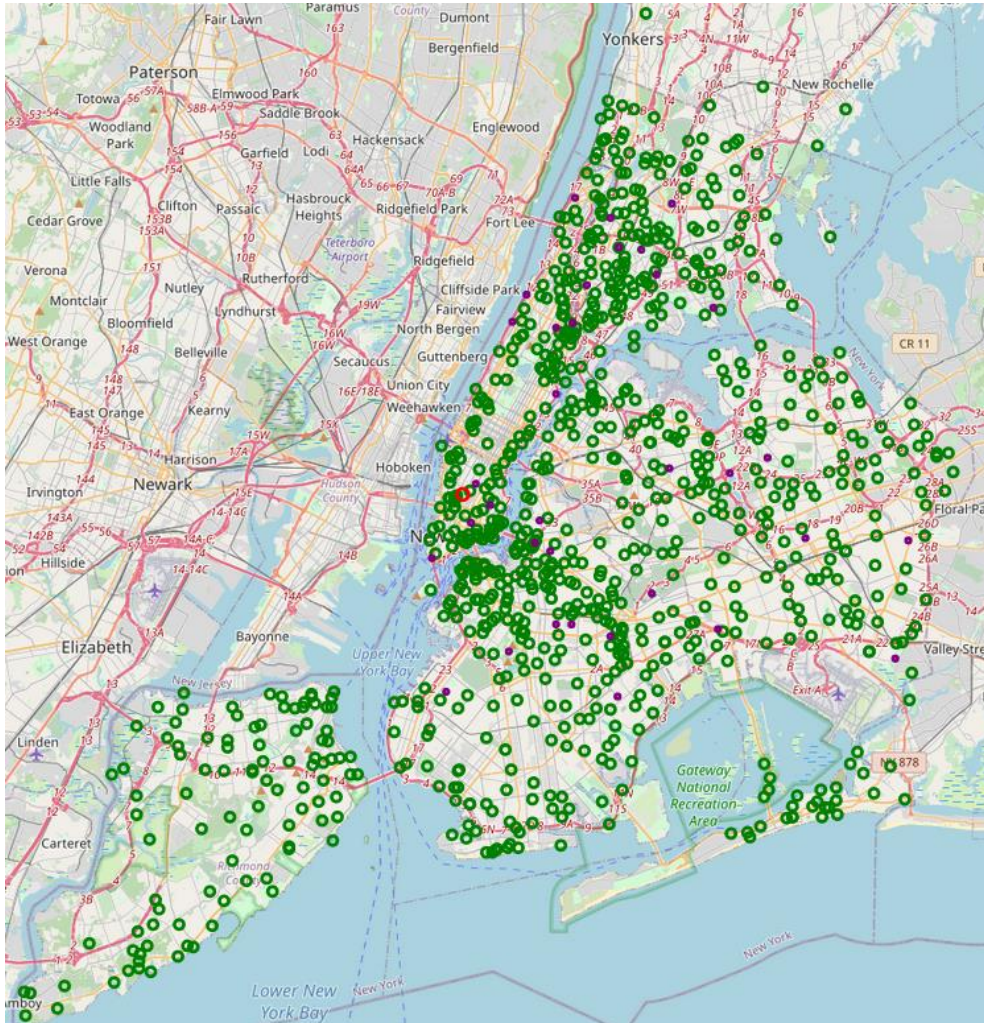

Crimes by size of park/playground

Criminal record over 6 years

Due to COVID-19 we can observed in 2020
drastically fall down of registered
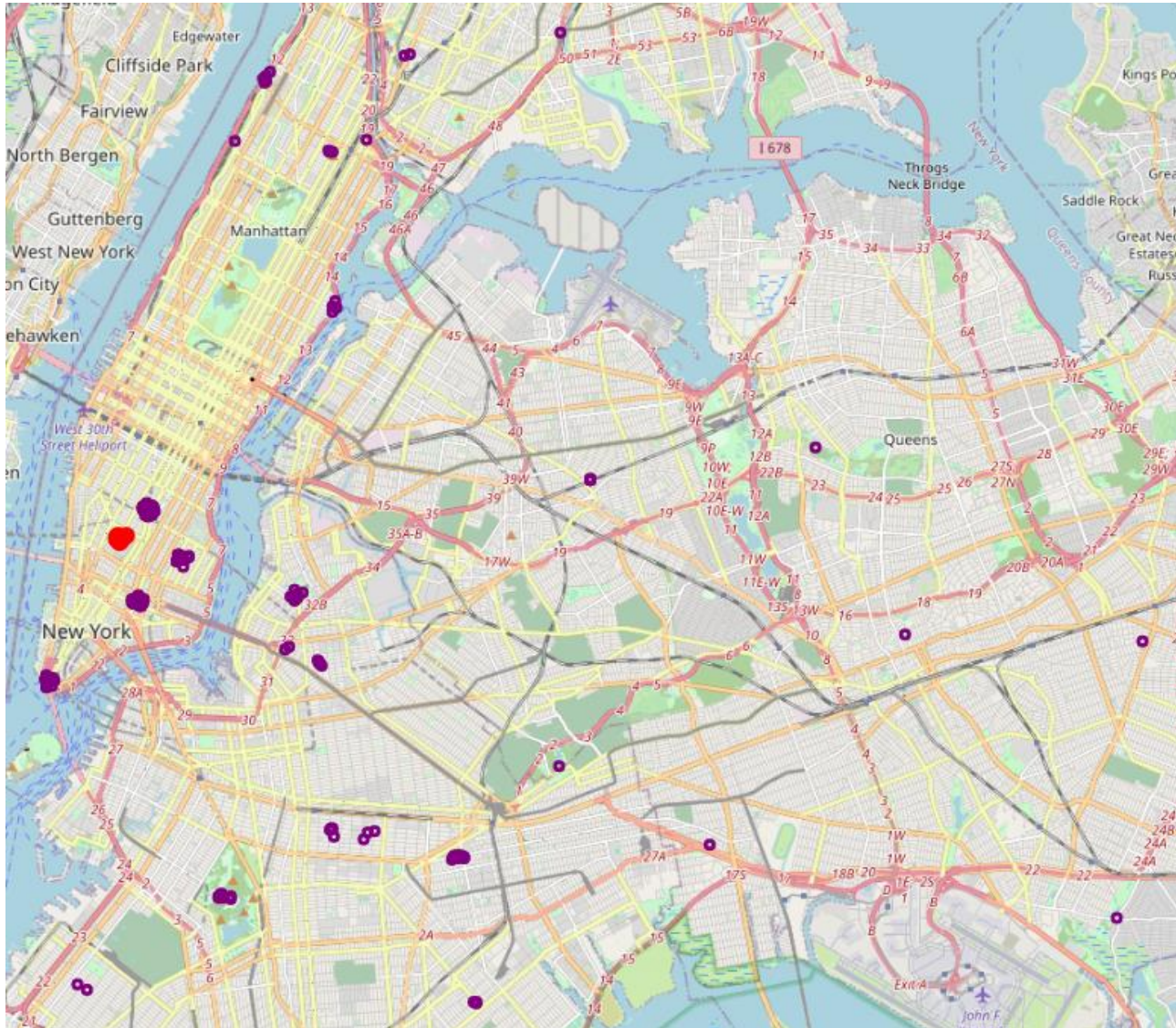crimes in the area of
parks and playgrounds

Machine learning – data clustering

ML groups parks into 3 groups: high, medium and low risk of criminal incident occurrence

	PARK
Cluster Labels	
High (red)	1
Medium (purple)	34
Low (green)	932

Venues at the „red zone"

Conclusions

- Huge part of all parks and venues in these areas are completly safe

- The most high-risk venues are located at Washington Square Park