Coursera Capstone – The Battles of Neighborhoods

Data Description

Description:

1. Data on police stations

As we are going to take a close look at the distribution of police stations in NYC, address data is very important in this project. However, there are not many structured data available, so we will have to scrape related data from NYC government website(here). Since this data does not have latitude and longitude information, we will transform 'Address' columns to get the latitude and longitude using Google Maps API. The reason why we don't use Foursquare API is that it showed poor performance in transforming address to longitude and latitude.

The scraped dataset looks as follows:

	Precinct	Phone	Address
0	1st Precinct, NY	212-334-0611	16 Ericsson Place, NY
1	5th Precinct, NY	212-334-0711	19 Elizabeth Street, NY
2	6th Precinct, NY	212-741-4811	233 West 10 Street, NY
3	7th Precinct, NY	212-477-7311	19 1/2 Pitt Street, NY
4	9th Precinct, NY	212-477-7811	321 East 5 Street, NY
5	10th Precinct, NY	212-741-8211	230 West 20th Street, NY
6	13th Precinct, NY	212-477-7411	230 East 21st Street, NY
7	Midtown South Precinct, NY	212-239-9811	357 West 35th Street, NY
8	17th Precinct, NY	212-826-3211	167 East 51st Street, NY
9	Midtown North Precinct, NY	212-767-8400	306 West 54th Street, NY
10	19th Precinct, NY	212-452-0600	153 East 67th Street, NY

2. Data on Crimes in NYC

NYC Crime data, which is obtained from NYC Open Data, consists of 24 columns and almost 7 million rows. As we only need the number and location of crimes happened in NYC, only 4 columns (level of offence, borough, latitude, and longitude) will be used. Also, for time saving purposes, about 100000 rows will be used for this analysis, not all the 7 million rows.

	Level	Borough	Latitude	Longitude
0	FELONY	BRONX	40.828848	-73.916661
1	FELONY	QUEENS	40.697338	-73.784557
2	FELONY	MANHATTAN	40.802607	-73.945052
3	MISDEMEANOR	QUEENS	40.654549	-73.726339
4	MISDEMEANOR	MANHATTAN	40.738002	-73.987891
5	FELONY	BROOKLYN	40.665023	-73.957111
6	MISDEMEANOR	MANHATTAN	40.720200	-73.988735
7	FELONY	BRONX	40.845707	-73.910398
8	MISDEMEANOR	BRONX	40.856711	-73.891900
9	MISDEMEANOR	MANHATTAN	40.765618	-73.963623
10	MISDEMEANOR	BRONX	40.822040	-73.891732

Conclusion:

We will visualize the distribution of police station and the crime happened in NYC. By comparing these results, we will be able to understand ultimately which borough needs to increase public security. Also, we expect to come up with a great idea to the city officers to solve urban problem.