

FINAL PROJECT

“The Battle of Neighborhoods”



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INDEX

Introduction

Data

Methodology

Results

Discussion.

Conclusion

Introduction

Citizen insecurity in New York State has increased notably in the last year, because in 2019, it put the authorities on alert, since there has been a 55% increase in murders, despite that crime in general continues to decline, and last January there was a decrease of 8%, murders have increased so far this year, and as of last Sunday the New York Police Department (NYPD) had registered 48 cases, compared to the 31 in the same period in 2018, with the boroughs of Brooklyn and Queens being one of the most unsafe.

Data

Regarding the districts of New York, it is shown that most of the murders have occurred in North Brooklyn, where it is evident that there is a sector that is covered by 10 police stations, in whose neighborhoods the highest number of cases have been registered . According to studies, the Crime Index in Brooklyn is 37.38 and the Safety Index is 62.62. It is also important to understand that Brooklyn is the most populous city in New York, where more than 2 and a half million people live in it, many more than in an average Spanish city.

The streets with the most homicides are in or around housing projects in Fort Greene, Brooklyn; Osborn Street in Brownsville, Brooklyn; and Rochdale Village Houses, between 130th Avenue and 166th Place, below Bedell Street in Queens.

The streets with the most homicides are in or around housing projects in Fort Greene, Brooklyn; Osborn Street in Brownsville, Brooklyn; In other words, the highest levels of this type of crime have been identified in this district. Brooklyn has the highest number of crashes in the city and the worst intersections are at Flatbush Avenue and Avenue H, and Saint Johns Place and Utica Avenue. Broadway Junction Station, Fulton Street, Brooklyn, is one of the main stations with increasing levels of violence. Prospect Park Station, Lincoln Road, Brooklyn. NYPD data reports this subway station has suffered many robbery incidents over the past five years, making it one of the most dangerous stations in the subway system

Regarding the county of Queens, it is a territory with the most important ethnic enclaves of New York, the most problematic areas of Queens are in the north, specifically in the southern area of La Guardia Airport, which is known as East Elmhurst and Jackson Heights . The other

focus of conflict is the South Jamaica area, a working-class residential area with high crime rates and gang fighting. The Rockaway Peninsula, with Arverne and Edgemere leading the way, is also advisable to avoid. In Queens, the section with the highest concentration of gangs is in the Jackson Heights, Elmhurst and Corona neighborhoods. the famous Boulevard of Death for pedestrians is Queens Blvd. In Queens County, the area between Corona, Elmhurst and Jackson Heights is plagued by the presence of criminal gangs.

Therefore, it suggests the need to understand which are the sectors with the greatest influx of people to reinforce security in these sectors and improve the security condition of the inhabitants.

Methodology

For this work we do segment and cluster only the neighborhoods, analyzing the 100 most common locations within a radius of 500 meters.

Subsequently, the most important localities are applied to dataframes through a cluster study, to know how the localities are concentrated. It is important to understand that Clusters have the following methodology:

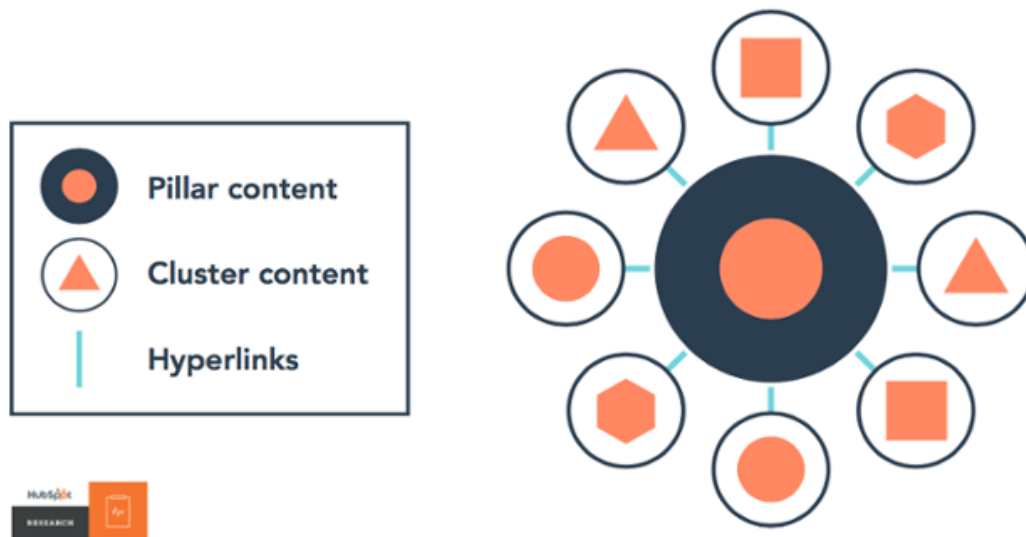
Understanding that the clusters are:

A group of interrelated companies and institutions, geographically concentrated, competing in the same business. They generally include:

- Companies located at various levels of the value chain
- Companies producing complementary goods and services
- Related institutions and organizations: universities, research centers, government agencies etc,

Concept coined by Michael Porter by observing reality converted "a posteriori" into a regional development tool. It is a sectorial economic development mode of the territory, also known as Innovative Group, Industrial District or Pole of Competitiveness.

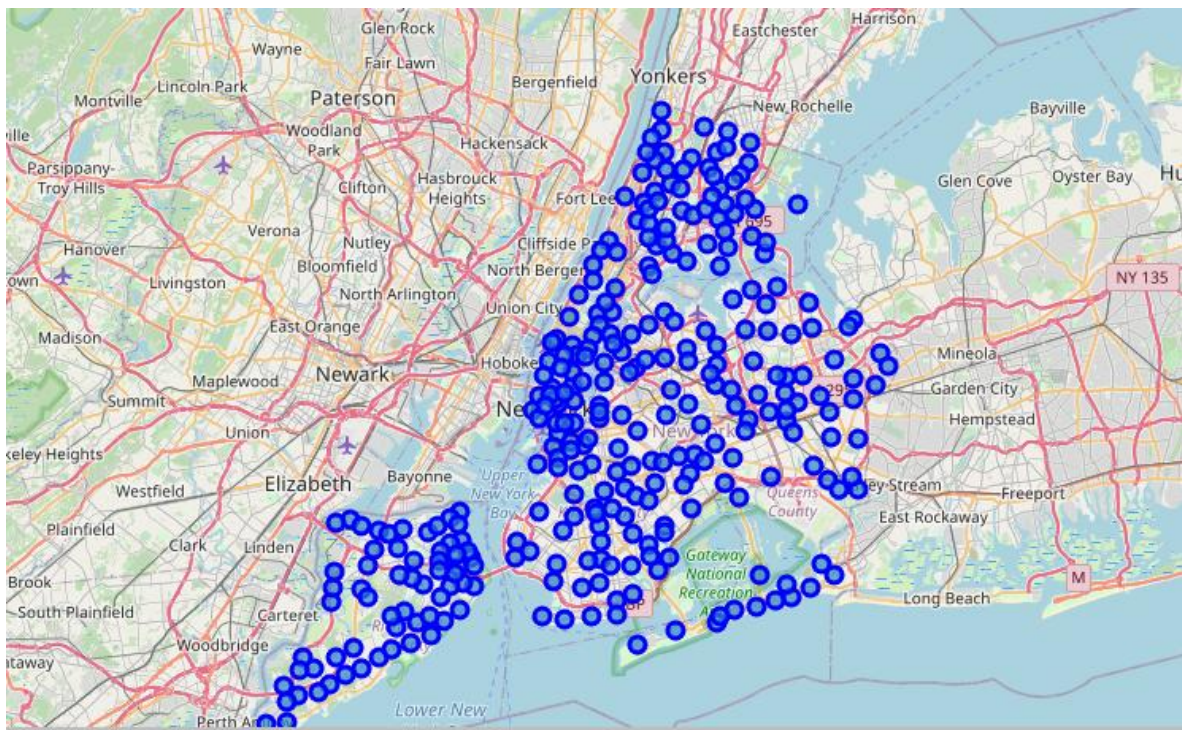
Topic Clusters



Source: <https://rockcontent.com/es/blog/topic-clusters/>

Results

First we obtain the map corresponding to the city of New York



We check the head of the New York neighborhoods with their respective latitudes and longitudes.

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
4	Bronx	Riverdale	40.890834	-73.912585

Later we add the map of the two cities to compare, Brooklyn and Queens.

➤ Brooklyn.



Later we disaggregate by cities of analysis.

	Borough	Neighborhood	Latitude	Longitude
0	Brooklyn	Bay Ridge	40.625801	-74.030621
1	Brooklyn	Bensonhurst	40.611009	-73.995180
2	Brooklyn	Sunset Park	40.645103	-74.010316
3	Brooklyn	Greenpoint	40.730201	-73.954241
4	Brooklyn	Gravesend	40.595260	-73.973471

The coordinates of the city of Brooklyn are: 40.6501038, -73.9495823 Later it was analyzed how many avenues would go within the study:

81 avenues correspond to the study analysis within Brooklyn:

- ✓ Bay Ridge
- ✓ Bensonhurst
- ✓ Sunset Park
- ✓ Greenpoint
- ✓ Gravesend
- ✓ Brighton Beach
- ✓ Sheepshead Bay
- ✓ Manhattan Terrace
- ✓ Flatbush
- ✓ Crown Heights
- ✓ East Flatbush
- ✓ Kensington
- ✓ Windsor Terrace
- ✓ Prospect Heights
- ✓ Brownsville
- ✓ Williamsburg
- ✓ Bushwick
- ✓ Bedford Stuyvesant
- ✓ Brooklyn Heights
- ✓ Cobble Hill
- ✓ Carroll Gardens
- ✓ Red Hook
- ✓ Gowanus
- ✓ Fort Greene
- ✓ Park Slope
- ✓ Cypress Hills
- ✓ East New York
- ✓ Starrett City
- ✓ Canarsie
- ✓ Flatlands
- ✓ Mill Island
- ✓ Manhattan Beach
- ✓ Coney Island
- ✓ Bath Beach
- ✓ Borough Park
- ✓ Dyker Heights
- ✓ Gerritsen Beach
- ✓ Marine Park
- ✓ Clinton Hill
- ✓ Sea Gate

- ✓ Downtown
- ✓ Boerum Hill
- ✓ Prospect Lefferts Gardens
- ✓ Ocean Hill
- ✓ City Line
- ✓ Bergen Beach
- ✓ Midwood
- ✓ Prospect Park South
- ✓ Georgetown
- ✓ East Williamsburg
- ✓ North Side
- ✓ South Side
- ✓ Ocean Parkway
- ✓ Fort Hamilton
- ✓ Ditmas Park
- ✓ Wingate
- ✓ Rugby
- ✓ Remsen Village
- ✓ New Lots
- ✓ Paerdegat Basin
- ✓ Mill Basin
- ✓ Fulton Ferry
- ✓ Vinegar Hill
- ✓ Weeksville
- ✓ Broadway Junction
- ✓ Dumbo
- ✓ Homecrest
- ✓ Highland Park
- ✓ Madison
- ✓ Erasmus

(2762, 7)							
	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Bay Ridge	40.625801	-74.030621	Pilo Arts Day Spa and Salon	40.624748	-74.030591	Spa
1	Bay Ridge	40.625801	-74.030621	Bagel Boy	40.627896	-74.029335	Bagel Shop
2	Bay Ridge	40.625801	-74.030621	Georgian Dream Cafe and Bakery	40.625586	-74.030196	Caucasian Restaurant
3	Bay Ridge	40.625801	-74.030621	Leo's Casa Calamari	40.624200	-74.030931	Pizza Place
4	Bay Ridge	40.625801	-74.030621	Pegasus Cafe	40.623168	-74.031186	Breakfast Spot

When finding how many avenues intervene in each neighborhood:, where Bath Beach, bay bridge, Bedford Stuyvesant, and more

	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Neighborhood						
Bath Beach	46	46	46	46	46	46
Bay Ridge	81	81	81	81	81	81
Bedford Stuyvesant	28	28	28	28	28	28
Bensonhurst	36	36	36	36	36	36
Bergen Beach	7	7	7	7	7	7
Boerum Hill	90	90	90	90	90	90
Borough Park	22	22	22	22	22	22
Brighton Beach	43	43	43	43	43	43
Broadway Junction	20	20	20	20	20	20
Brooklyn Heights	100	100	100	100	100	100
Brownsville	16	16	16	16	16	16
Bushwick	70	70	70	70	70	70
Canarsie	6	6	6	6	6	6
Carroll Gardens	100	100	100	100	100	100

There are 289 uniques categories.

Now we analyze the venues for each sector.

Ski Area	Smoke Shop	Snack Place	Soccer Field	South American Restaurant	Southern / Soul Food Restaurant	Spa	Spanish Restaurant	Speakeasy	Sporting Goods Shop	Sports Bar	Sports Club	Stadium	Steakhouse	Supermarket
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The frecuencies are:

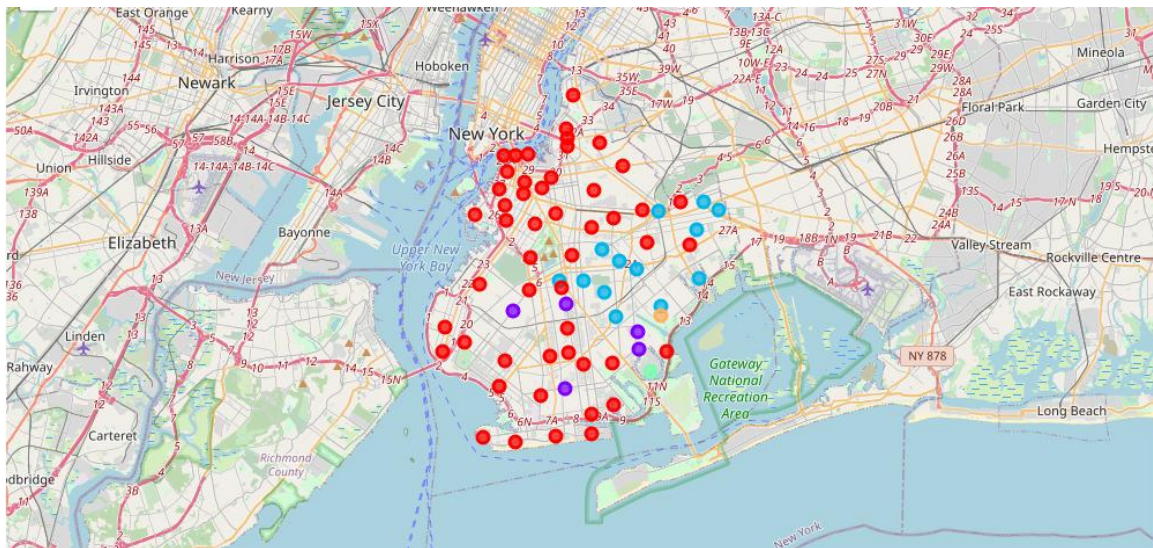
	Neighborhood	Yoga Studio	Accessories Store	African Restaurant	American Restaurant	Antique Shop	Arepa Restaurant	Argentinian Restaurant	Art Gallery	Arts & Crafts Store	Arts & Entertainment	Asian Restaurant	Athletics & Sports	G
0	Bath Beach	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.021739	0.000000	
1	Bay Ridge	0.012346	0.000000	0.000000	0.037037	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
2	Bedford Stuyvesant	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
3	Bensonhurst	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.027778	0.000000	
4	Bergen Beach	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.142857	
5	Boerum Hill	0.022222	0.000000	0.000000	0.011111	0.011111	0.00	0.000000	0.000000	0.033333	0.000000	0.000000	0.011111	
6	Borough Park	0.000000	0.000000	0.000000	0.045455	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
7	Brighton Beach	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
8	Broadway Junction	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
9	Brooklyn Heights	0.040000	0.000000	0.000000	0.010000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.020000	0.010000	
10	Brownsville	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
11	Bushwick	0.000000	0.000000	0.000000	0.014286	0.000000	0.00	0.000000	0.014286	0.000000	0.000000	0.000000	0.000000	
12	Canarsie	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	0.000000	0.000000	0.000000	0.000000	0.166667	0.000000	

Restaurants in general are very commons en each place, specially american, italian restaurants.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Bath Beach	Bubble Tea Shop	Pharmacy	Italian Restaurant	Gas Station	Chinese Restaurant	Donut Shop	Dessert Shop	Fast Food Restaurant	Pizza Place	Cantonese Restaurant
1	Bay Ridge	Italian Restaurant	Spa	Pizza Place	Bar	American Restaurant	Greek Restaurant	Hookah Bar	Thai Restaurant	Bagel Shop	Pharmacy
2	Bedford Stuyvesant	Coffee Shop	Café	Pizza Place	Bar	Discount Store	Tiki Bar	Fried Chicken Joint	New American Restaurant	Boutique	Gift Shop
3	Bensonhurst	Chinese Restaurant	Italian Restaurant	Donut Shop	Sushi Restaurant	Park	Pizza Place	Ice Cream Shop	Smoke Shop	Bar	Noodle House
4	Bergen Beach	Harbor / Marina	Baseball Field	Hockey Field	Athletics & Sports	Playground	Park	Food	Flower Shop	Food & Drink Shop	Food Court

In the table above we have the venue most common in each place, for example the most common are restaurants as Italian, coffee shop, and Spa too.

Now, we analyze the clusters



We identified five clusters, the general are red (1 clusters red) and after cluster d (sky)

Cluster 1: Most common place restaurants.

3]:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Bay Ridge	Italian Restaurant	Spa	Pizza Place	Bar	American Restaurant	Greek Restaurant	Hookah Bar	Thai Restaurant	Bagel Shop	Pharmacy
1	Bensonhurst	Chinese Restaurant	Italian Restaurant	Donut Shop	Sushi Restaurant	Park	Pizza Place	Ice Cream Shop	Smoke Shop	Bar	Noodle House
2	Sunset Park	Bakery	Pizza Place	Mexican Restaurant	Latin American Restaurant	Bank	Mobile Phone Shop	Ice Cream Shop	Deli / Bodega	Fried Chicken Joint	Gym
3	Greenpoint	Bar	Coffee Shop	Pizza Place	Cocktail Bar	Deli / Bodega	Record Shop	Yoga Studio	Mexican Restaurant	French Restaurant	Nail Salon
4	Gravesend	Bakery	Pizza Place	Lounge	Italian Restaurant	Chinese Restaurant	Gym	Furniture / Home Store	Donut Shop	Cosmetics Shop	Pharmacy
5	Brighton Beach	Eastern European Restaurant	Restaurant	Russian Restaurant	Beach	Sushi Restaurant	Mobile Phone Shop	Pharmacy	Gourmet Shop	Playground	Korean Restaurant
6	Sheepshead Bay	Dessert Shop	Turkish Restaurant	Sandwich Place	Yoga Studio	Bagel Shop	Pizza Place	Hotel	Creperie	Restaurant	Russian Restaurant

Cluster 2: Banks and coffee shop.

Cluster 2

54]: Brooklyn_merged.loc[Brooklyn_merged['Cluster Labels'] == 1, Brooklyn_merged.columns[[1] + list(range(5, Brooklyn_merged.shape[1]))]]

54]:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
8	Flatbush	Caribbean Restaurant	Coffee Shop	Deli / Bodega	Mexican Restaurant	Bank	Sandwich Place	Bagel Shop	Pharmacy	Juice Bar	Hardware Store
34	Borough Park	Bank	Pizza Place	Fast Food Restaurant	Café	Pharmacy	Eastern European Restaurant	Hotel	American Restaurant	Grocery Store	Deli / Bodega
48	Georgetown	Bank	Donut Shop	Pharmacy	Miscellaneous Shop	Burger Joint	Supermarket	Breakfast Spot	Mexican Restaurant	Frozen Yogurt Shop	Discount Store
60	Mill Basin	Chinese Restaurant	Pizza Place	Japanese Restaurant	Bagel Shop	Pharmacy	Bank	Food Truck	Sushi Restaurant	Supermarket	Liquor Store
66	Homecrest	Bank	Grocery Store	Donut Shop	Mexican Restaurant	Sushi Restaurant	Sandwich Place	Chinese Restaurant	Pizza Place	Bakery	Flower Shop

Cluster 3: Pizzas places and lati restaurantes, and restaurants in general.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
10	East Flatbush	Moving Target	Pharmacy	Print Shop	Food & Drink Shop	Supermarket	Fast Food Restaurant	Caribbean Restaurant	Liquor Store	Park	Chinese Restaurant
25	Cypress Hills	Latin American Restaurant	Ice Cream Shop	Donut Shop	Fast Food Restaurant	Fried Chicken Joint	Bank	Dance Studio	Pizza Place	Caribbean Restaurant	Food
26	East New York	Deli / Bodega	Convenience Store	Bus Station	Fast Food Restaurant	Metro Station	Event Service	Salon / Barbershop	Pharmacy	Caribbean Restaurant	Child Care Service
27	Starrett City	Bus Stop	Pizza Place	Caribbean Restaurant	Pharmacy	Bus Station	Supermarket	Chinese Restaurant	Donut Shop	American Restaurant	Moving Target
28	Canarsie	Thai Restaurant	Gym	Grocery Store	Caribbean Restaurant	Food	Asian Restaurant	Fish & Chips Shop	Fast Food Restaurant	Field	Filipino Restaurant
29	Flatlands	Pharmacy	Caribbean Restaurant	Fried Chicken Joint	Fast Food Restaurant	Bar	Park	Paper / Office Supplies Store	Chinese Restaurant	Bus Station	Nightclub
44	City Line	Donut Shop	Fried Chicken Joint	Pizza Place	Mobile Phone Shop	Grocery Store	Shoe Store	Bus Stop	Gift Shop	Liquor Store	Mexican Restaurant
47	Prospect Park South	Pizza Place	Caribbean Restaurant	Grocery Store	Clothing Store	Fast Food Restaurant	Mobile Phone Shop	Fried Chicken Joint	Donut Shop	Latin American Restaurant	Mexican Restaurant

Cluster 4: We analyze poods and child care service in cluster 5.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
30	Mill Island	Pool	Women's Store	Flea Market	Farmers Market	Fast Food Restaurant	Field	Filipino Restaurant	Fish & Chips Shop	Fish Market	Flower Shop

Cluster 5

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
59	Paerdegat Basin	Child Care Service	Auto Garage	Food	Asian Restaurant	Flea Market	Fast Food Restaurant	Field	Filipino Restaurant	Fish & Chips Shop	Fish Market

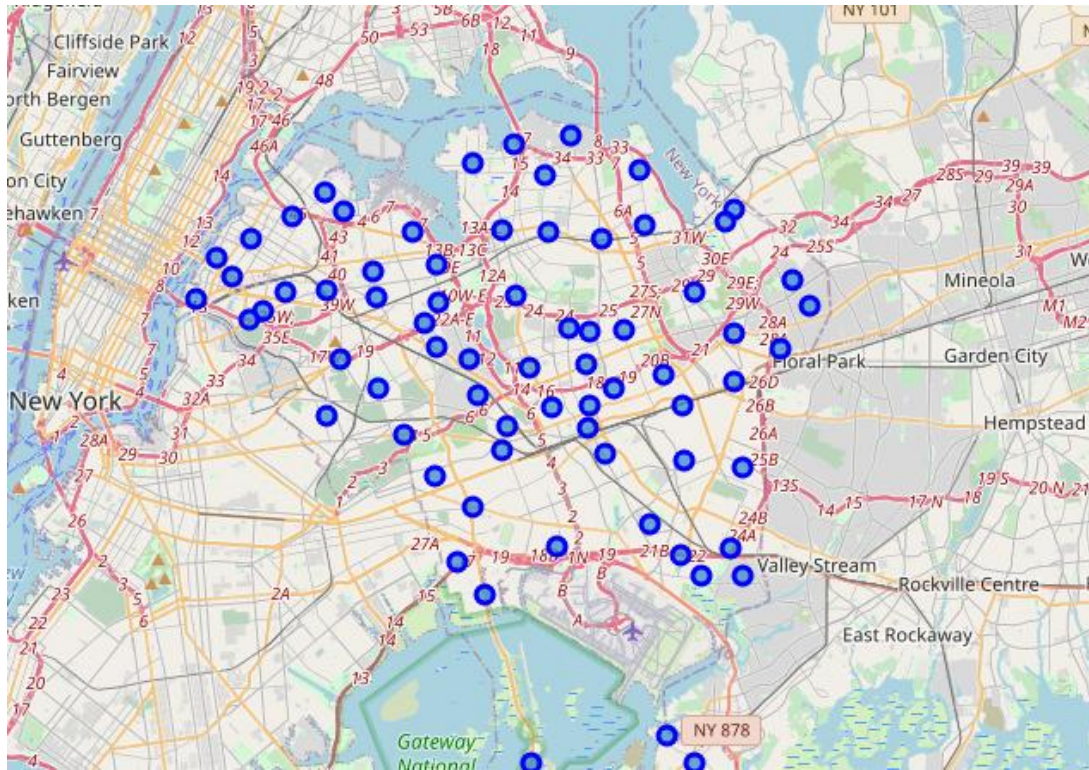
Queens



For the Queens sector, the city's neighborhoods have been analyzed, adding their latitude and longitude:

	Borough	Neighborhood	Latitude	Longitude
0	Queens	Astoria	40.768509	-73.915654
1	Queens	Woodside	40.746349	-73.901842
2	Queens	Jackson Heights	40.751981	-73.882821
3	Queens	Elmhurst	40.744049	-73.881656
4	Queens	Howard Beach	40.654225	-73.838138

The map is:



The neighborhoods corresponding to Queens have been obtained:

Astoria
 Woodside
 Jackson Heights
 Elmhurst
 Howard Beach
 Corona
 Forest Hills
 Kew Gardens
 Richmond Hill
 Flushing
 Long Island City
 Sunnyside
 East Elmhurst

The SS is calculated The number of neighborhoods and places available in each neighborhood of Queens

	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Neighborhood						
Arverne	20	20	20	20	20	20
Astoria	99	99	99	99	99	99
Astoria Heights	13	13	13	13	13	13
Auburndale	21	21	21	21	21	21
Bay Terrace	37	37	37	37	37	37
Bayside	72	72	72	72	72	72
Bayswater	1	1	1	1	1	1
Beechhurst	16	16	16	16	16	16
Bellaire	13	13	13	13	13	13
Belle Harbor	17	17	17	17	17	17
Bellerose	19	19	19	19	19	19
Blissville	19	19	19	19	19	19
Breezy Point	5	5	5	5	5	5

Subsequently, the type of locality in each neighborhood is analyzed according to frequency, here is important the American restaurants.

	Neighborhood	Yoga Studio	Accessories Store	Afghan Restaurant	Airport Terminal	American Restaurant	Arepa Restaurant	Argentinian Restaurant	Art Gallery	Art Museum	Arts & Crafts Store	Arts & Entertainment	Asian Restaurant
0	Arverne	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000
1	Astoria	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000
2	Astoria Heights	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000
3	Auburndale	0.000000	0.000000	0.000000	0.000000	0.047619	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000
4	Bay Terrace	0.000000	0.027027	0.000000	0.000000	0.054054	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000
5	Bayside	0.013889	0.000000	0.000000	0.000000	0.027778	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.013889
6	Bayswater	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000
7	Beechhurst	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000
8	Bellaire	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000

As example we calculate the sector in each venue: in almost all we have surf spot and middle eastern restaurants, bar for example.

```

----Arverne----
      venue  freq
0      Surf Spot 0.20
1    Metro Station 0.10
2  Sandwich Place 0.10
3    Burrito Place 0.05
4      Pizza Place 0.05
5          Café 0.05
6      Board Shop 0.05
7      Coffee Shop 0.05
8          Beach 0.05
9      Bus Stop 0.05

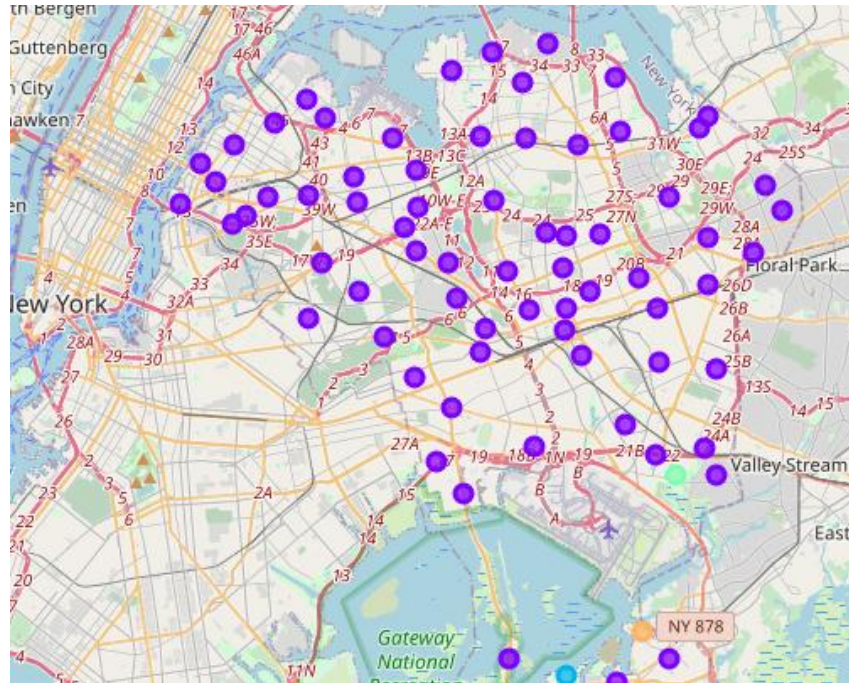
----Astoria----
      venue  freq
0 Middle Eastern Restaurant 0.06
1              Bar 0.06
2          Hookah Bar 0.05
3      Pizza Place 0.04
4    Seafood Restaurant 0.04
5      Greek Restaurant 0.03
6          Café 0.03
7 Mediterranean Restaurant 0.03
8      Indian Restaurant 0.03
9              Bakery 0.03

```

You get the top of towns for each neighborhood:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Arverne	Surf Spot	Metro Station	Sandwich Place	Burrito Place	Board Shop
1	Astoria	Middle Eastern Restaurant	Bar	Hookah Bar	Seafood Restaurant	Pizza Place
2	Astoria Heights	Playground	Bakery	Bus Station	Plaza	Food
3	Auburndale	Italian Restaurant	Korean Restaurant	Miscellaneous Shop	Mattress Store	Fast Food Restaurant
4	Bay Terrace	Clothing Store	Shoe Store	Cosmetics Shop	Mobile Phone Shop	Kids Store

When analyzing by cluster we have the following:



We can see that there is a lot of homogeneity in the results obtained and concentric in Clister 1 like places as beach, and restaurants specially. We have five cluster to do:

Cluster 1

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
43	Breezy Point	Beach	Monument / Landmark	Trail	Bus Stop	Fish & Chips Shop
50	Neponsit	Beach	Women's Store	Fish Market	Farm	Farmers Market
78	Hammels	Beach	Gym / Fitness Center	Dog Run	Fried Chicken Joint	Bus Station

Cluster 2 (we have middle Eastern restaurants, grocery store, and more restaurants as thail and italian restaurant)

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Astoria	Middle Eastern Restaurant	Bar	Hookah Bar	Seafood Restaurant	Pizza Place
1	Woodside	Grocery Store	Filipino Restaurant	Latin American Restaurant	Bakery	Thai Restaurant
2	Jackson Heights	Latin American Restaurant	Peruvian Restaurant	South American Restaurant	Bakery	Grocery Store
3	Elmhurst	Thai Restaurant	Mexican Restaurant	Bubble Tea Shop	Chinese Restaurant	Vietnamese Restaurant
4	Howard Beach	Italian Restaurant	Pharmacy	Fast Food Restaurant	Sandwich Place	Flower Shop
5	Corona	Mexican Restaurant	Supermarket	Convenience Store	Bakery	Pizza Place
6	Forest Hills	Gym / Fitness Center	Gym	Yoga Studio	Pizza Place	Convenience Store
7	Kew Gardens	Chinese Restaurant	Pizza Place	Park	Donut Shop	Cosmetics Shop

Cluster 3. In cluster 3,4,5 we have parks, recording studios and playground. This places are very common in each place.

```
: Queens_merged.loc[Queens_merged['Cluster Labels'] == 2, Queens_merged.columns[[1] + list(range(5, Queens_merged.shape[1]))]]
```

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
63	Somerville	Park	Filipino Restaurant	Event Space	Eye Doctor	Falafel Restaurant

Cluster 4

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
64	Brookville	Recording Studio	Deli / Bodega	Women's Store	Fish & Chips Shop	Eye Doctor

Cluster 5

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
79	Bayswater	Playground	Women's Store	Fish & Chips Shop	Eye Doctor	Falafel Restaurant

Discussion and conclusions

It is evident that tourist areas such as hotels, restaurants and more are concentrated in territories such as Queen and Brooklyn, which is why there is a need to adjust security in these locations, in addition to strengthening policies around 500 meters around the clusters especially intended for restaurant venues as mentioned above.

Security has taken on an unprecedented dimension; with quality factors and ways of life, linked to urban design, known as “geoprevention”.

"Crime prevention" has proven to be a useful and effective strategy to prevent as a consequence of different sociocultural, economic or political situations. Therefore, a natural access control, reinforcement of the territory, maintenance of public spaces and community participation could be added.