
COURSERA
CAPSTONE:

WHERE TO
OPEN AN IRISH
PUB IN
BROOKLYN

BATTLE OF THE
NEIGHBORHOODS



NEW YORK AND BROOKLYN NEIGHBORHOODS

STEP ONE - MAPPING THE NEIGHBORHOODS



MAPPING NEW YORK

- Folium map used with open data shapefile to map New York's neighborhoods

	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

	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

BROOKLYN NEIGHBORHOODS

- A subset was made from the NY dataset of just Brooklyn neighborhoods, also Folium mapped.

BROOKLYN NEIGHBORHOODS MAPPED FOR VISUALISATION

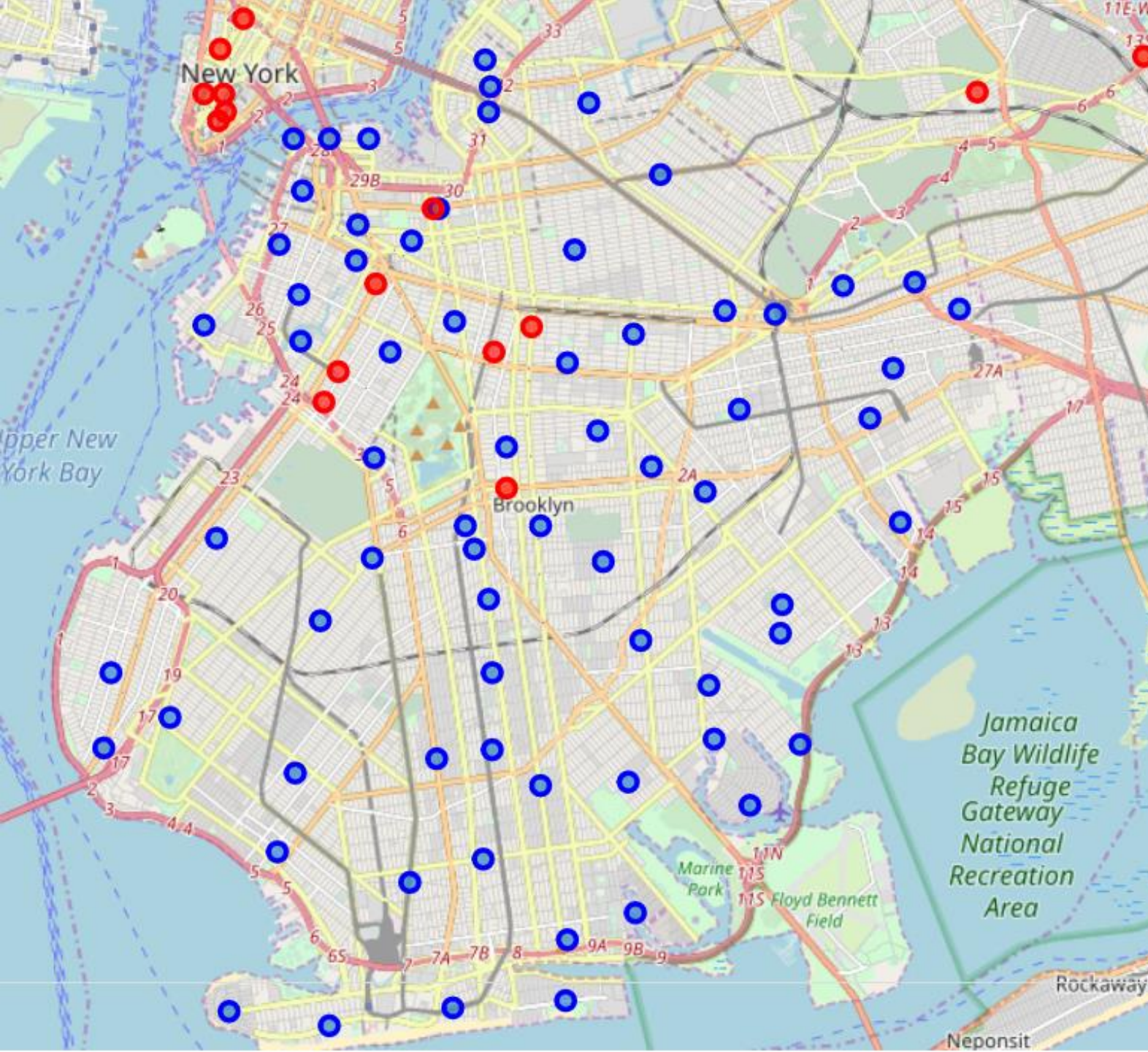
```
MAP_BROOKLYN =  
FOLIUM.MAP(LOCATION=[LATIT  
UDE, LONGITUDE],  
ZOOM_START=12)
```



IRISH PUBS IN BROOKLYN

- Foursquare data used to find Irish pubs in Brooklyn

```
ut[139]: 0      Bagel Pub
          1      Bagel Pub Park Slope
          2      The Donut Pub
          3      Fourth Avenue Pub
          4      O'Hara's Restaurant & Pub
          5      The Irish American Pub
          6      Black Horse Pub
          7      Joe's Pub
          8      Putnam's Pub & Cooker
          9      McGee's Pub
         10      Playwright Celtic Pub
         11      Foley's NY Pub & Restaurant
         12      Connolly's Pub & Restaurant
         13      Nancy Whiskey Pub
         14      The Bailey Pub & Brasserie
         15      Playwright Irish Pub
         16      Peculier Pub
         17      P.J. Carney's Pub
         18      Peter Dillon's Pub
         19      Connolly's Pub & Restaurant
         20      Tigin Irish Pub
         21      Mulligan's Pub
         22      O'Fallon's Irish Pub
```

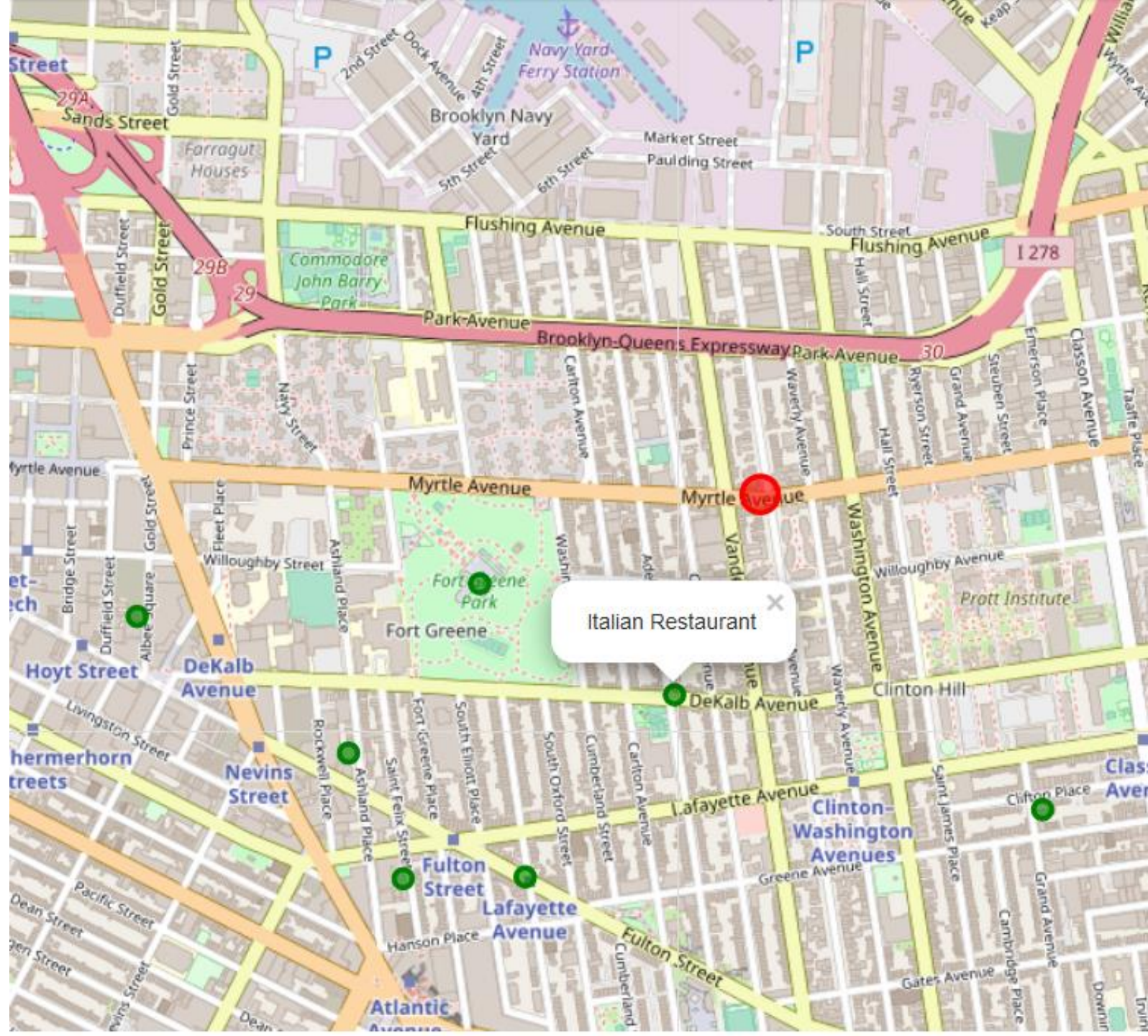



MAPPING THE IRISH PUBS

- Visualising the Irish pubs from Foursquare onto the folium map
- Irish pubs are red dots
- Neighborhoods are blue dots

EXAMINING THE AREA AROUND THE IRISH PUBS - WHAT ARE THESE AREAS LIKE?

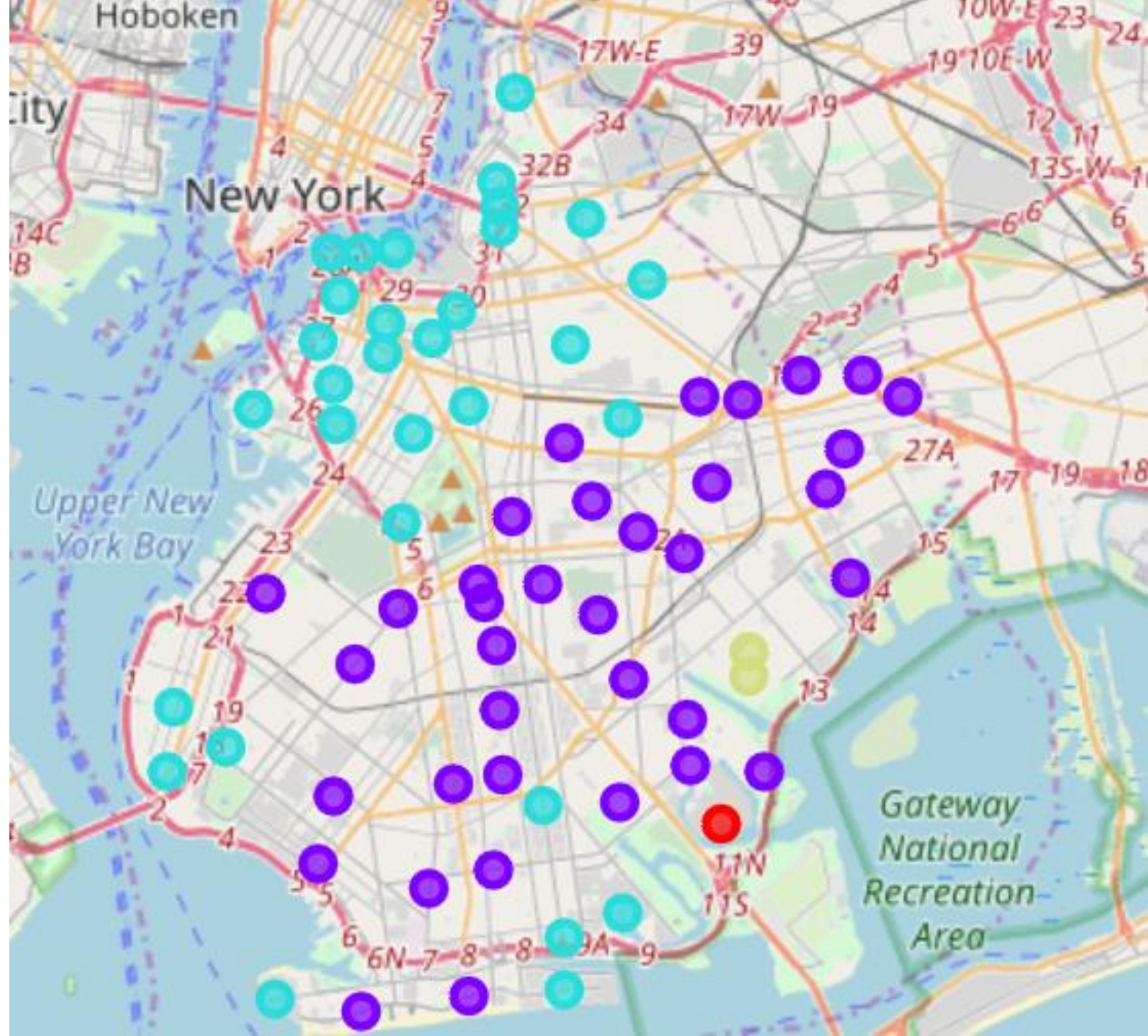
- Examine what is in the same area as the Irish pubs
- Are these busy areas?
Trending?



49	North Side	0.040000	0.00	0.00	0.040000	0.000000	0.02	0.0
50	Ocean Hill	0.000000	0.00	0.00	0.000000	0.000000	0.00	0.0
51	Ocean GETTING THE DATA READY FOR K-MEANS	0.000000	0.00	0.00	0.000000	0.000000	0.00	0.0
52	Paerdegat Basin	0.000000	0.00	0.00	0.000000	0.000000	0.00	0.0
53	<ul style="list-style-type: none"> Grouping by venue, counts, one-hot encoding 	0.020000	0.02	0.00	0.040000	0.000000	0.00	0.0
54	<ul style="list-style-type: none"> Creates a dataframe ready to be used in k-means based on type and frequency of venue in each neighbourhood 	0.000000	0.00	0.00	0.040000	0.000000	0.00	0.0
55	Prospect Lefferts Gardens	0.000000	0.00	0.00	0.020833	0.000000	0.00	0.0
56	Prospect Park South	0.000000	0.00	0.00	0.000000	0.000000	0.00	0.0
57	Red Hook	0.000000	0.00	0.00	0.061224	0.020408	0.00	0.0

BROOKLYN IN FIVE CLUSTERS

- Clustering completed
- Five distinct clusters
- Clusters 0, 4 and 5 are outliers
- Clusters 1 and 2 are largest
- 1 is central and residential (purple)
- 2 is closest to Manhattan and commercial/entertainment based (blue)



CONCLUSION

- Boerum Hill and Clinton Hill are the two neighborhoods with Irish bars in cluster 2
- Both have considerable nightlife/entertainment
- These would be the selections to open an Irish pub

35	Dyker Heights	Plaza	Park	Golf Course	Bagel Shop
36	Gerritsen Beach	Pizza Place	Ice Cream Shop	Harbor / Marina	Bar
38	Clinton Hill	Italian Restaurant	Restaurant	Wine Shop	Thai Restaurant
39	Sea Gate	Home Service	Spa	Beach	Bus Station
40	Downtown	Chinese Restaurant	Bar	Coffee Shop	Grocery Store
41	Boerum Hill	Bar	Coffee Shop	Furniture / Home Store	Yoga Studio
49	East Williamsburg	Bar	Bakery	Coffee Shop	Cocktail Bar