NYC vs. LA

defining similar neighborhoods

Introduction

o NYC and LA - No two cities in the states are compared as much as these two

o Millions of articles have been published comparing many different aspects of these two Cities.

o But for this project, we are going to focus on similarities rather than differences

o Our goal is to explain a New Yorker, who has never been in LA, about neighborhoods in LA by highlighting their similarities with neighborhoods in in NYC, or vice versa.

Data

○ NYC data

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

https://geo.nyu.edu/catalog/nyu_2451_34572

○ LA data

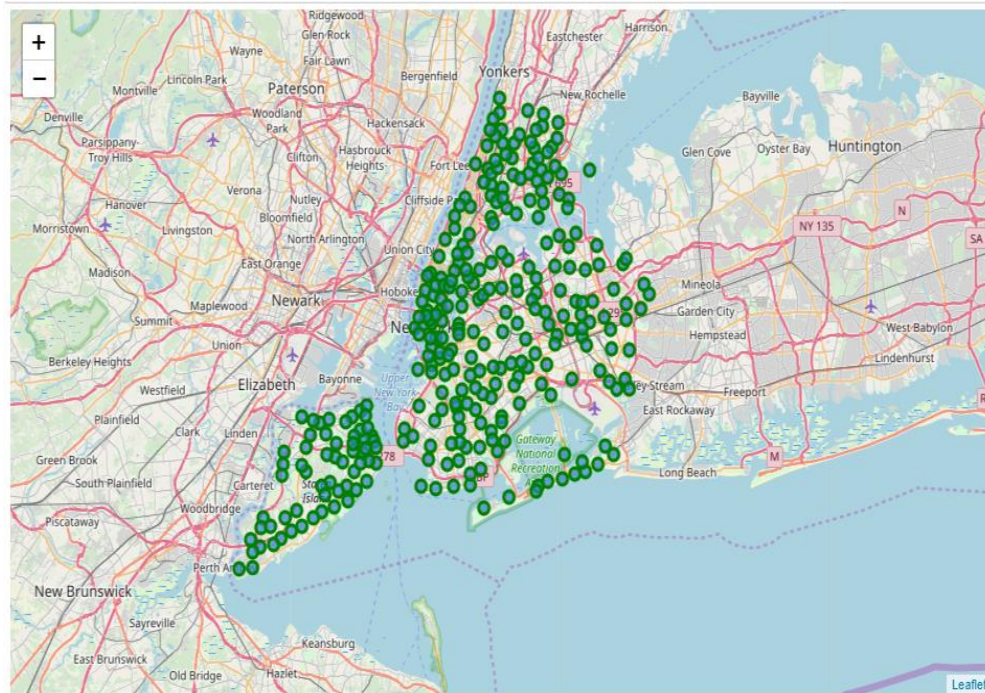|	Zipcode	Neighborhood
0	90001	Los Angeles(South Los Angeles), Florence-Graham
1	90002	Los Angeles(Southeast Los Angeles, Watts)
2	90003	Los Angeles(South Los Angeles, Southeast Los A...
3	90004	Los Angeles(Hancock Park, Rampart Village, Vir...

http://www.laalmanac.com/communications/cm02a90001-90899.php

○ Foursquare API

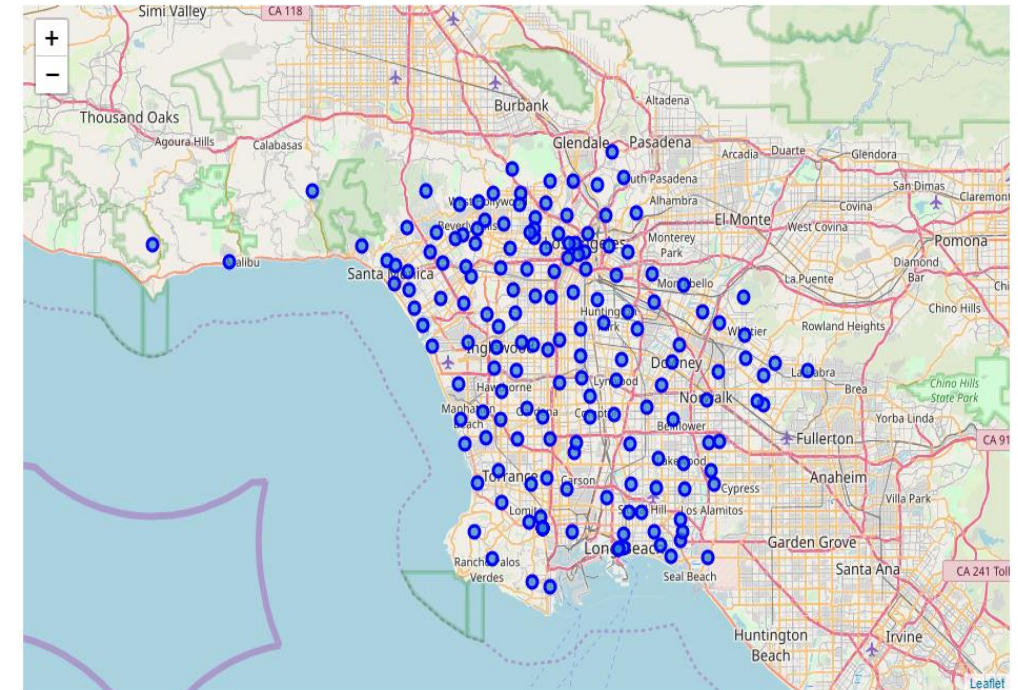|	Zip	City	State	Latitude	Longitude	Timezone	Daylight savings time flag	geopoint
0	92232	Calexico	CA	33.026203	-115.284581	-8	1	33.026203, -115.284581
1	93227	Goshen	CA	36.357151	-119.425371	-8	1	36.357151, -119.425371
2	93234	Huron	CA	36.209815	-120.084700	-8	1	36.209815, -120.0847
3	93529	June Lake	CA	37.765218	-119.077690	-8	1	37.765218, -119.07769
4	93761	Fresno	CA	36.746375	-119.639658	-8	1	36.746375, -119.639658

https://public.opendatasoft.com/ I

Methodology

o Explanatory Analysis

NYC

LA

- NYC is consisting of 5 boroughs and 306 neighborhoods

- Average distance of two closest points : 533.1m

- LA is consist of total178 cities and counties

- Average distance of two closest points : 1023.3m

Methodology

o Clustering

	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	0	Coffee Shop	Pizza Place	Bar	Italian Restaurant	American Restaurant
1	1	Park	Water Park	Gay Bar	Food Truck	Fountain
2	2	Scenic Lookout	Rock Climbing Spot	Water Park	Gay Bar	Fountain
3	3	Deli / Bodega	Beach	Italian Restaurant	Bus Stop	Bagel Shop
4	4	Pizza Place	Deli / Bodega	Chinese Restaurant	Pharmacy	Grocery Store
5	5	Sculpture Garden	Water Park	Gay Bar	Food Truck	Fountain

- Venue information is downloaded from foursquare API for all 484 neighborhoods from two Cities (NY – 306, LA -178)
- Then all 484 neighborhoods are categorized into 15 Clusters, using K-mean clustering algorithm.

Results

o Number of Neighborhoods by Cluster labels

NYC

Lable	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Neighborhoods	101	2		28	72	1	2	1	76	1	1	11	8	1	1

LA

Lable	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Neighborhoods	86		1	1	2				7	15		64		2	

Cluster 0 Example

Bayside, Dumbo, Flatiron, Gramercy, etc. (from NY) Beverly Hills, Gardena, Long Beach, Signal Hill, etc. (from LA)

Cluster 4 Example

Crown Heights ,Norwood, Queensboro Hill, Sunnyside, etc. (from NY) South Los Angeles, City of Industry , etc. (from LA)
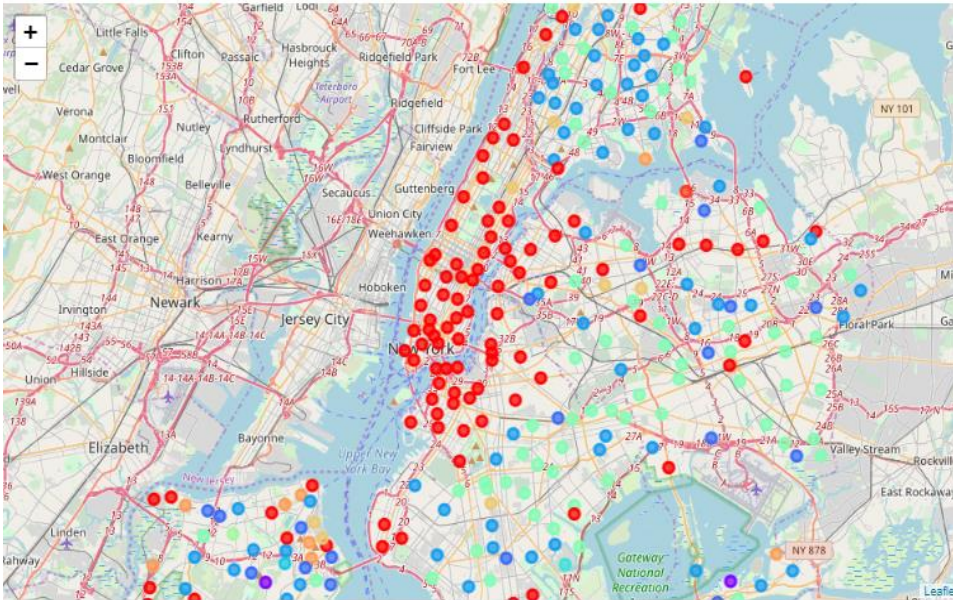
Cluster 8 Example

Brownsville, Coney Island, Forest Hills, Prospect Park South, etc. (from NY) , Compton East Rancho Dominguez, La Mirada , Hyde Park , etc. (from LA)
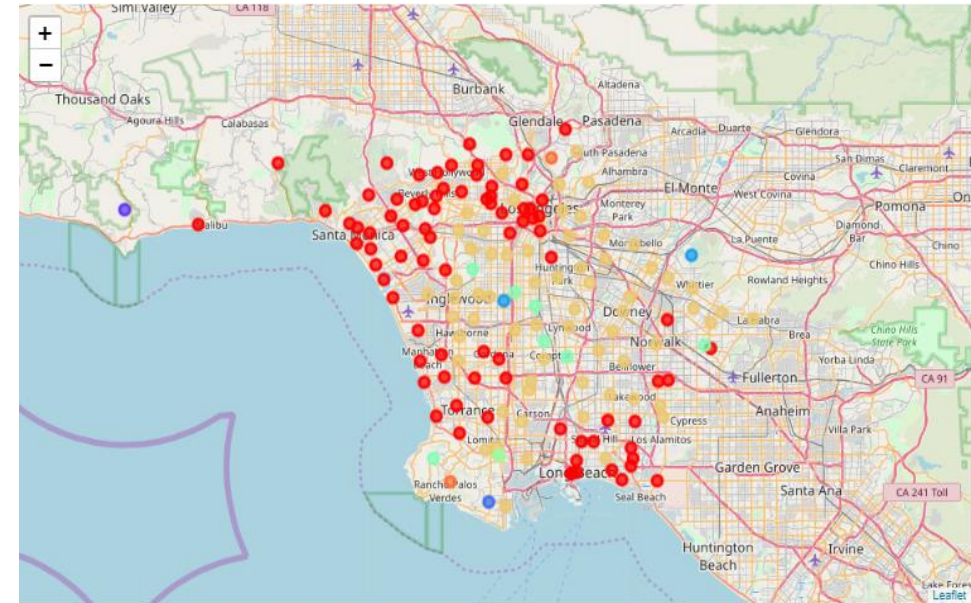
Cluster 11 Example

East Harlem, Flatbush, Kingsbridge, Stapleton, etc. (from NY) Carson, Downey, Inglewood, Montebello, etc. (from LA)

Discussion and Conclusion

NYC

LA

- It is noticeable that both NYV/LA have neighborhoods who are categorized into a same Cluster, based on it's venue information

- If you are a New Yorker and wants to find a new place in LA (or vice versa) you can refer to this project to find a neighborhood which is similar to your comfort zone

- Beyond LA vs. NY, I hope all people who are planning to settle down in a new place to have a soft-landing with the help from this project.