

The Battle of the Neighborhoods – Best Restaurants in Chicago Neighborhoods

Finding Best Restaurants in Chicago Neighborhoods for NeoCon Visitors

Background - What is Neocon?

- ❖ NeoCon (National Exposition of Contract Interior Furnishings) held every June at The Mart in Chicago since 1969
- Attended by nearly 5000 manufacturers and 50,000 design professionals

Business Problem – What is the objective?

- ❖ NeoCon visitors usually pick restaurants close to The Mart for convenience, to enable them to have a richer experience of visiting Chicago and getting the most of the exposition
- Highlight the best restaurants/cuisines in diverse neighborhoods of the city

Interest - Who will benefit?

- NeoCon visitors
- ❖ Approximately 58 million annual Chicago tourists



Photo Courtesy hpd-collaborative.org

Data Sources

List of Chicago neighborhoods



Geographic coordinates using Geopy

	Community area	Villages	Latitude	Longitude
0	Albany Park	Albany Park, Mayfair, North Mayfair, Ravenswood M	41.971937	-87.716174
1	Archer Heights	Archer Heights	41.811422	-87.726165
2	Armour Square	Armour Square, Chinatown, Wentworth Gardens	41.840033	-87.633107
3	Ashburn	Ashburn, Ashburn Estates, Beverly View, Crestline	39.043719	-77.487490
4	Auburn Gresham	Auburn Gresham, Gresham	41.743387	-87.656042
5	Austin	Galewood, The Island, North Austin, South Austin,	30.271129	-97.743700
6	Avalon Park	Avalon Park, Marynook, Stony Island Park	41.745035	-87.588658
7	Avondale	Avondale, Jackowo, Polish Village, Wacławowo	33.435499	-112.349557
8	Belmont Cragin	Belmont Central, Brickyard, Cragin, Hanson Park	41.931698	-87.768670
9	Beverly	Beverly, East Beverly, West Beverly	42.558428	-70.880049
10	Bridgeport	Bridgeport	41.167041	-73.204835
11	Brighton Park	Brighton Park	41.818922	-87.698942

Venue locations using Foursquare API

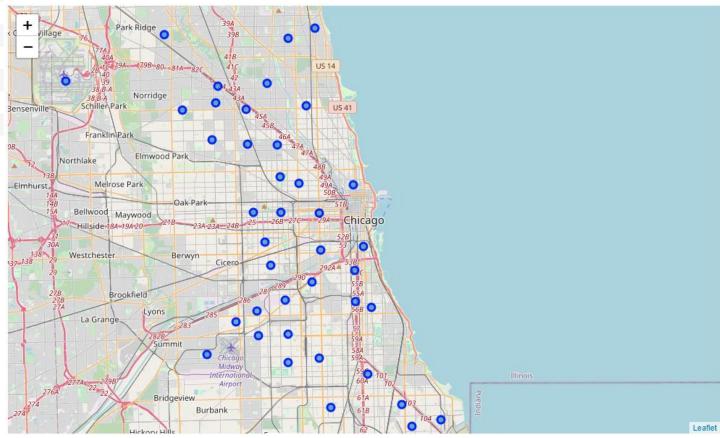
	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
1	Albany Park	41.971937	-87.716174	Peking Mandarin Resturant	41.968292	-87.715783	Chinese Restaurant
2	Albany Park	41.971937	-87.716174	Banpojung	41.975707	-87.715609	Korean Restaurant
3	Albany Park	41.971937	-87.716174	Jimmy's	41.968615	-87.717157	Fast Food Restaurant
4	Albany Park	41.971937	-87.716174	Seo Hae Kwan	41.968593	-87.717333	Korean Restaurant
5	Albany Park	41.971937	-87.716174	Chifa Grill Chicken Restaurant	41.968593	-87.717333	Latin American Restaurant
6	Albany Park	41.971937	-87.716174	Elotes Y Chicharones	41.968470	-87.716888	Mexican Restaurant
7	Albany Park	41.971937	-87.716174	Modelo Club House Restaurant	41.968398	-87.717670	Mexican Restaurant
8	Albany Park	41.971937	-87.716174	Pan Po Jung	41.975979	-87.715630	Korean Restaurant
9	Albany Park	41.971937	-87.716174	Wok N Chop	41.975984	-87.715588	Chinese Restaurant
10	Albany Park	41.971937	-87.716174	Gorilla Sushi	41.968240	-87.713559	Sushi Restaurant

Data preprocessing

List of Chicago neighborhoods mapped with their geographic coordinates

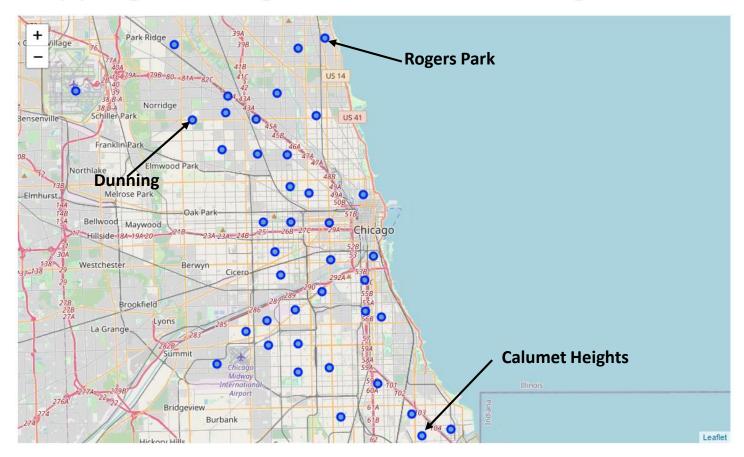
	Community area	Villages	Latitude	Longitude	
0	Albany Park	Albany Park,Mayfair,North Mayfair,Ravenswood M	41.971937	-87.716174	
1	Archer Heights	Archer Heights	41.811422	-87.726165	
2	Armour Square	Armour Square, Chinatown, Wentworth Gardens	41.840033	-87.633107	
3	Ashburn	Ashburn, Ashburn Estates, Beverly View, Crestline	39.043719	-77.487490	
4	Auburn Gresham	Auburn Gresham, Gresham	41.743387	-87.656042	
73	West Lawn	Ford City,West Lawn	40.329815	-75.994381	< 1
74	West Pullman	West Pullman	41.675046	-87.637823	İ
75	West Ridge	$Nortown, Peterson\ Park, Rosehill, West\ Ridge, West$	42.003548	-87.696243	
76	West Town	East Village, Noble Square, Polish Downtown, Pula	41.901421	-87.686166	В
77	Woodlawn	West Woodlawn, Woodlawn	38.330050	-89.032569	1

78 rows × 4 columns



Exploratory Data Analysis

Mapping the neighborhoods of Chicago



Spanning all the way south to South Chicago and Calumet Heights (about 15 miles) to Rogers park in the North (about 11 miles) to Dunning on the west (about 11 miles), the city of Chicago offers plenty of neighborhoods within half hour driving distance from the Mart and the city center for visitors to explore the different neighborhoods

Exploratory Data Analysis

The nearest and most popular restaurants in the neighborhoods were obtained by using Foursquare API

	Restaurant_Category	Frequency
0	Mexican Restaurant	136
1	Fast Food Restaurant	54
2	Chinese Restaurant	42
3	American Restaurant	41
4	Italian Restaurant	29
5	Restaurant	22
6	Seafood Restaurant	16
7	Latin American Restaurant	14
8	Sushi Restaurant	13
9	Asian Restaurant	11

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
1	Albany Park	41.971937	-87.716174	Peking Mandarin Resturant	41.968292	-87.715783	Chinese Restaurant
2	Albany Park	41.971937	-87.716174	Banpojung	41.975707	-87.715609	Korean Restaurant
3	Albany Park	41.971937	-87.716174	Seo Hae Kwan	41.968593	-87.717333	Korean Restaurant
4	Albany Park	41.971937	-87.716174	Chifa Grill Chicken Restaurant	41.968593	-87.717333	Latin American Restaurant
5	Albany Park	41.971937	-87.716174	La Fogata	41.968135	-87.714796	Mexican Restaurant
6	Albany Park	41.971937	-87.716174	Pan Po Jung	41.975979	-87.715630	Korean Restaurant
7	Albany Park	41.971937	-87.716174	Gorilla Sushi	41.968240	-87.713559	Sushi Restaurant
8	Albany Park	41.971937	-87.716174	El Siglo XX	41.968470	-87.719570	Latin American Restaurant
9	Albany Park	41.971937	-87.716174	Magic Grill	41.968613	-87.712440	Mexican Restaurant
10	Albany Park	41.971937	-87.716174	El Santo Taqueria	41.975815	-87.713226	Mexican Restaurant

Analyzing the categories of restaurants in Chicago Area; It can be inferred from the data that Mexican Restaurants are the most popular type of restaurants followed by fast food, Chinese, American, Italian, restaurant, Seafood, Latin American, Sushi, and Asian.

Statistical Data Analysis

Rating the 10 most common types of restaurants in each neighborhood

	Neighborhood	1st Most Common Restaurant	2nd Most Common Restaurant	3rd Most Common Restaurant	4th Most Common Restaurant	5th Most Common Restaurant	6th Most Common Restaurant	7th Most Common Restaurant	8th Most Common Restaurant	9th Most Common Restaurant	10th Most Common Restaurant
0	Albany Park	Korean Restaurant	Mexican Restaurant	Latin American Restaurant	Sushi Restaurant	Chinese Restaurant	Vietnamese Restaurant	Dumpling Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant
1	Archer Heights	Italian Restaurant	Greek Restaurant	Chinese Restaurant	Dim Sum Restaurant	German Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant	Fast Food Restaurant	Empanada Restaurant
2	Armour Square	Fast Food Restaurant	Vietnamese Restaurant	Dim Sum Restaurant	Greek Restaurant	German Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant	Empanada Restaurant	Eastern European Restaurant
3	Ashburn	Fast Food Restaurant	American Restaurant	Italian Restaurant	Cajun / Creole Restaurant	Restaurant	Mexican Restaurant	Chinese Restaurant	Thai Restaurant	Sushi Restaurant	Latin American Restaurant
4	Auburn Gresham	Restaurant	Mexican Restaurant	Hotpot Restaurant	German Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant	Fast Food Restaurant	Empanada Restaurant	Eastern European Restaurant
5	Austin	Mexican Restaurant	Fast Food Restaurant	American Restaurant	Vietnamese Restaurant	Dim Sum Restaurant	German Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant	Empanada Restaurant
6	Avalon Park	Mexican Restaurant	Restaurant	American Restaurant	Latin American Restaurant	Chinese Restaurant	Dim Sum Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant	Fast Food Restaurant
7	Avondale	Mediterranean Restaurant	Vietnamese Restaurant	Dim Sum Restaurant	German Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant	Fast Food Restaurant	Empanada Restaurant	Eastern European Restaurant
8	Belmont Cragin	Mexican Restaurant	Chinese Restaurant	Restaurant	Japanese Restaurant	Cantonese Restaurant	Seafood Restaurant	Dim Sum Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant
9	Beverly	Restaurant	Mexican Restaurant	Mediterranean Restaurant	Chinese Restaurant	Dim Sum Restaurant	French Restaurant	Fondue Restaurant	Filipino Restaurant	Fast Food Restaurant	Empanada Restaurant

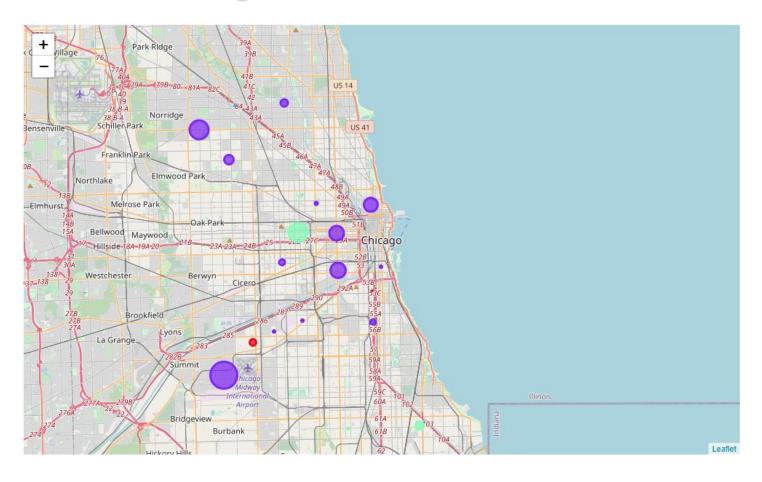






Statistical Data Analysis

Clusters of neighborhoods with similar restaurant categories mapped



Results

Clusters of neighborhoods with similar restaurant categories

<u>Cluster 1</u>	<u>Cluster 2</u>	<u>Cluster 3</u>
FastFood, Vietnamese, Dimsum restaurants	Mexican, Tapas, Latin American, and Italian Restaurants	American, Vietnamese and Dim Sum Restaurants
Neighborhoods: Armour Square, Hyde Park	Neighborhoods: Lincoln Square, Edgewater	Neighborhoods: Jefferson Park, Morgan Park



Cluster 4

Mexican and American restaurants

Neighborhoods: Logan Square, Avalon Park

Cluster 5

Mediterranean and Vietnamese restaurants

Neighborhoods: Avondale



Conclusion



The objective of this project to use Foursquare location data and regional clustering of restaurant types to highlight the best restaurants/cuisines in different neighborhoods of the city has been successfully accomplished by the creation of the clusters of the neighborhoods.

My hope is that this database will be helpful for all the NeoCon and Chicago visitors in exploring the city and enjoying great meals in diverse neighborhoods of the city.