



# Chicago Job Relocation

PYTHON CAPSTONE PROJECT



# Choosing the best place to live

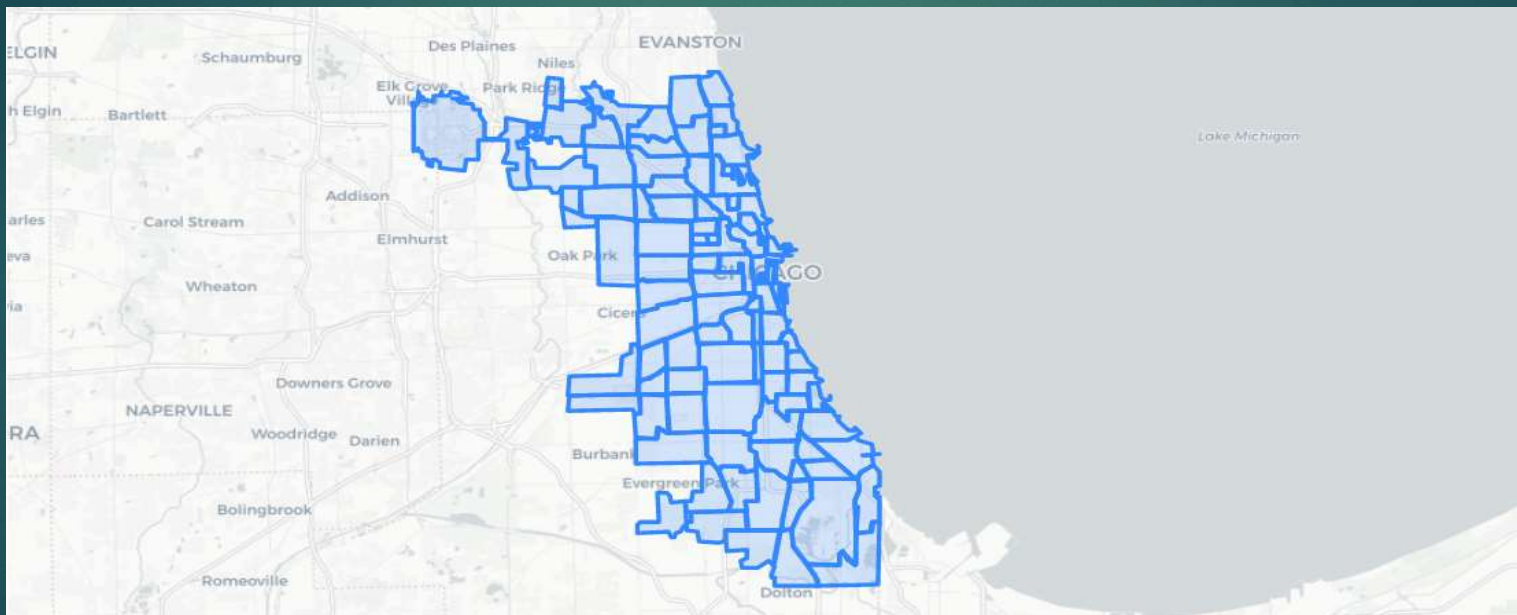
- Map out the neighborhoods that make up Chicago
- Look for the best schools in the district.
- Find venues within the neighborhoods and cluster similar places to limit search.



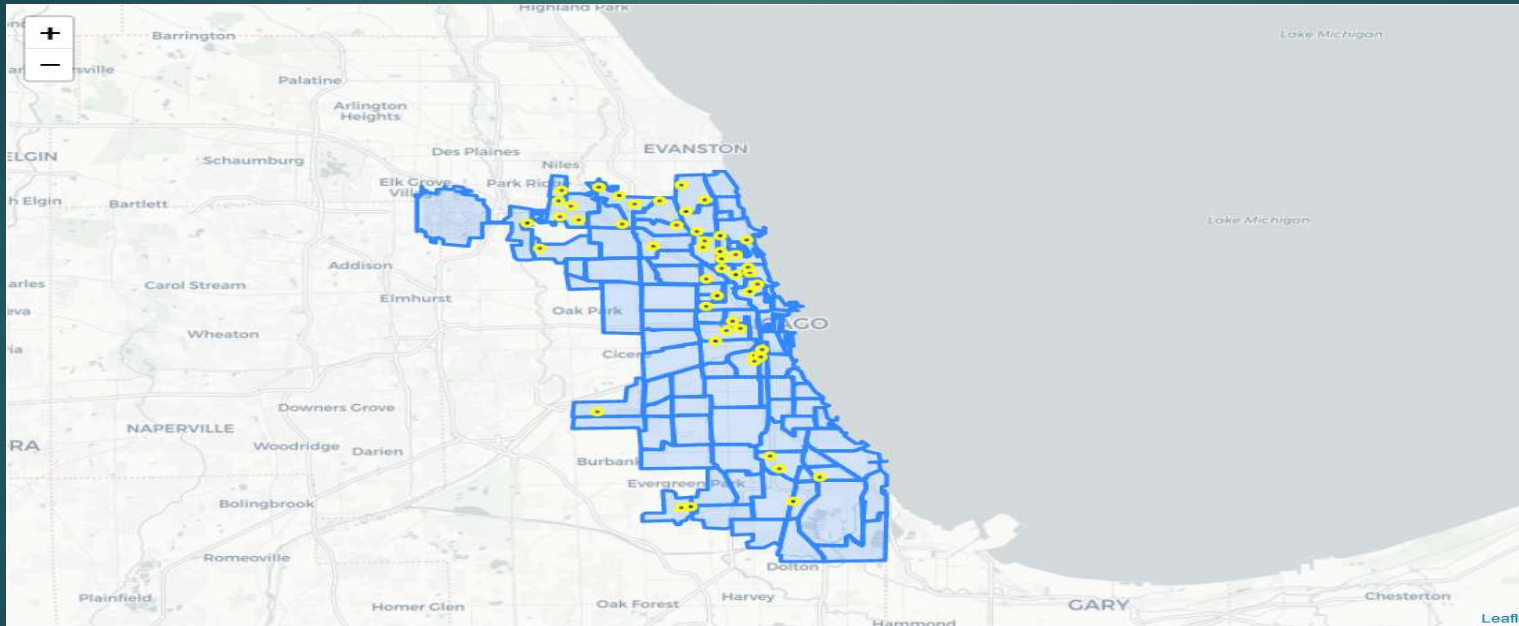
# Data Sources and Cleaning

- **Chicago Neighborhoods:** JSON of each neighborhood (<https://github.com/jkgiesler/parse-chicago-neighborhoods>)
- **School Ranking:** list of the top 50 schools in Chicago. (<https://www.schooldigger.com/go/IL/schoolrank.aspx>)
- **Resources:** API provided by to pull venues from Foursquare (<https://foursquare.com/>)

# Chicago Neighborhoods



# Top 50 Elementary Schools



# Neighborhoods and School Counts

Neighborhood	
Lake View	4
Norwood Park	4
Lincoln Park	3
Sauganash, Forest Glen	3
West Ridge	3
Little Italy, UIC	2
Bridgeport	2
Chatham	2
Mount Greenwood	2
North Center	2
Uptown	1
River North	1
West Town	1
North Park	1
Armour Square	1
Chinatown	1

Neighborhood	
Calumet Heights	1
Edison Park	1
Irving Park	1
Dunning	1
Old Town	1
West Loop	1
East Village	1
Garfield Ridge	1
Jefferson Park	1
Sheffield & DePaul	1
Pullman	1
Lincoln Square	1
Albany Park	1
Lower West Side	1
Bucktown	1

# Foursquare API

Sample data pulled for  
Albany Park of the top  
100 venues

	name	categories	lat	lng
0	Jaafer Sweets	Bakery	41.969691	-87.708085
1	Great Sea Chinese Restaurant	Chinese Restaurant	41.968496	-87.710678
2	Brazilian Bowl	Brazilian Restaurant	41.968537	-87.708558
3	Lindo Michoacan	Grocery Store	41.968864	-87.708453
4	la Michoacana Premium	Ice Cream Shop	41.968559	-87.706510



## Neighborhood Venue Count

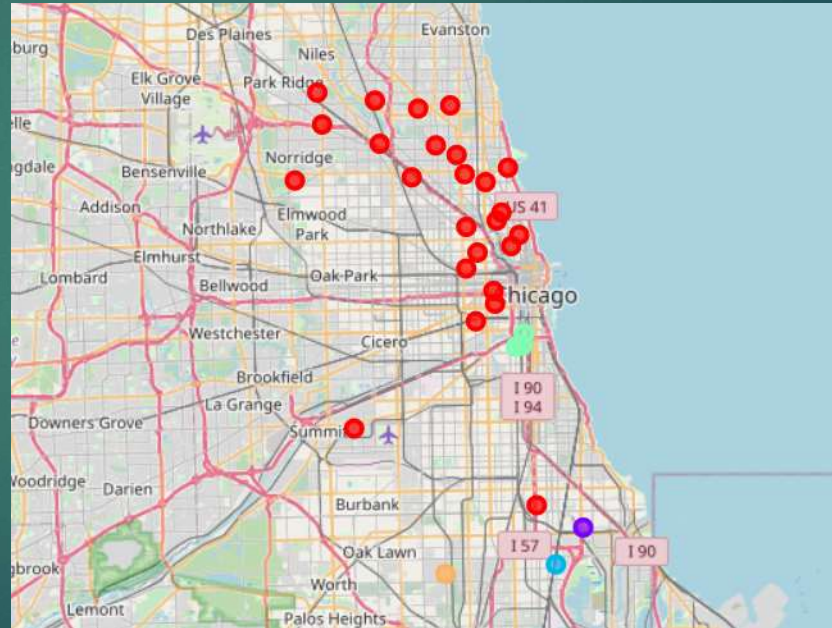
Venues found in each neighborhood. Limited to only those that have at least 1 of the Top 50 schools in the district.

Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Albany Park	35	35	35	35	35	35
Armour Square	12	12	12	12	12	12
Bridgeport	13	13	13	13	13	13
Bucktown	58	58	58	58	58	58
Calumet Heights	7	7	7	7	7	7
Chatham	9	9	9	9	9	9
Chinatown	44	44	44	44	44	44
Dunning	4	4	4	4	4	4
East Village	72	72	72	72	72	72
Edison Park	12	12	12	12	12	12
Garfield Ridge	12	12	12	12	12	12
Irving Park	22	22	22	22	22	22
Jefferson Park	8	8	8	8	8	8
Lake View	85	85	85	85	85	85
Lincoln Park	42	42	42	42	42	42
Lincoln Square	73	73	73	73	73	73
Little Italy, UIC	55	55	55	55	55	55
Lower West Side	22	22	22	22	22	22
Mount Greenwood	4	4	4	4	4	4
North Center	16	16	16	16	16	16
North Park	10	10	10	10	10	10
Norwood Park	9	9	9	9	9	9
Old Town	69	69	69	69	69	69
Pullman	1	1	1	1	1	1
River North	52	52	52	52	52	52
Sauganash,Forest Glen	21	21	21	21	21	21
Sheffield & DePaul	33	33	33	33	33	33
Uptown	33	33	33	33	33	33
West Loop	35	35	35	35	35	35
West Ridge	43	43	43	43	43	43
West Town	27	27	27	27	27	27



# Cluster Analysis

- Majority of Neighborhoods for North of Downtown Chicago
- Three only contain 1 neighborhood.
- Other clusters found South of Downtown Chicago



# Neighborhood Top Venues

Most of the venues in the cluster include a variety of places including restaurants, grocery stores, gyms, etc.

	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	Albany Park	Grocery Store	Donut Shop	Ice Cream Shop	Mexican Restaurant	Coffee Shop	Sandwich Place	Thrift / Vintage Store	Hot Dog Joint	Cocktail Bar	Supermarket
3	Bucktown	Bar	Coffee Shop	Pizza Place	Hot Dog Joint	Dive Bar	Thai Restaurant	Park	Pool	Dance Studio	Ice Cream Shop
5	Chatham	Gas Station	Chinese Restaurant	Sandwich Place	Gym / Fitness Center	Men's Store	Harbor / Marina	Fast Food Restaurant	Sporting Goods Shop	Café	Adult Boutique
7	Dunning	Laundry Service	Sports Bar	Playground	Park	Fast Food Restaurant	Convenience Store	Adult Boutique	Persian Restaurant	Other Repair Shop	Outdoor Supply Store
8	East Village	Bar	Café	Yoga Studio	Pizza Place	Sandwich Place	Sushi Restaurant	New American Restaurant	Mediterranean Restaurant	Italian Restaurant	Spa
9	Edison Park	Theater	Pizza Place	Salon / Barbershop	Seafood Restaurant	Hot Dog Joint	Bar	Mexican Restaurant	Breakfast Spot	Liquor Store	Italian Restaurant
10	Garfield Ridge	Bakery	Eastern European Restaurant	Gym / Fitness Center	Park	Construction & Landscaping	Pizza Place	Mexican Restaurant	Bar	Bank	Other Repair Shop
11	Irving Park	Bus Station	Coffee Shop	Bar	Train Station	Pharmacy	Brewery	Pizza Place	Tapes Restaurant	Gas Station	Bookstore
12	Jefferson Park	Train Station	Convenience Store	Donut Shop	Chinese Restaurant	Furniture / Home Store	Filipino Restaurant	Video Store	Ice Cream Shop	Concert Hall	Outdoors & Recreation
13	Lake View	Women's Store	Mexican Restaurant	Café	Bar	Cosmetics Shop	Coffee Shop	Clothing Store	Optical Shop	Boutique	Bus Station
14	Lincoln Park	Music Venue	Coffee Shop	Pizza Place	Park	Theater	Hot Dog Joint	Flower Shop	Fried Chicken Joint	German Restaurant	Grocery Store
15	Lincoln Square	Bar	Thai Restaurant	Boutique	Park	Pub	Discount Store	Café	Indian Restaurant	Sushi Restaurant	Pizza Place
16	Little Italy, UIC	Sandwich Place	Thai Restaurant	Pizza Place	Chinese Restaurant	Breakfast Spot	Italian Restaurant	Bar	Bakery	Coffee Shop	Park
17	Lower West Side	Mexican Restaurant	Art Gallery	Record Shop	Flower Shop	Grocery Store	Gym	Park	Comfort Food Restaurant	Pizza Place	Food & Drink Shop
19	North Center	Thai Restaurant	Pharmacy	Bar	Convenience Store	Used Auto Dealership	Beer Garden	Ice Cream Shop	Pizza Place	German Restaurant	Latin American Restaurant
20	North Park	Cosmetics Shop	Pharmacy	Donut Shop	Liquor Store	Pizza Place	Gym	Mini Golf	Fast Food Restaurant	Ice Cream Shop	Pedestrian Plaza
21	Norwood Park	Discount Store	Fast Food Restaurant	Gas Station	Chinese Restaurant	Park	Bar	Mexican Restaurant	Pharmacy	Plaza	Poke Place
22	Old Town	Comedy Club	Mexican Restaurant	Bar	Coffee Shop	Gym	Hotel	Park	Italian Restaurant	Dessert Shop	Juice Bar
24	River North	Bus Station	Department Store	Pharmacy	American Restaurant	Sporting Goods Shop	Sandwich Place	Donut Shop	Supplement Shop	Supermarket	Shopping Mall
25	Sauganash Forest Glen	Sandwich Place	Park	Restaurant	Moving Target	Plaza	Diner	Salon / Barbershop	Currency Exchange	Gas Station	Sports Bar
26	Sheffield & DePaul	Yoga Studio	Gym	Donut Shop	Storage Facility	Spa	Coffee Shop	Cycle Studio	Other Repair Shop	Deli / Bodega	Café
27	Uptown	Bus Station	Pizza Place	Mexican Restaurant	Grocery Store	Golf Course	Yoga Studio	Sushi Restaurant	Coffee Shop	Donut Shop	Real Estate Office

# Conclusion and Discussion

- Neighborhoods on the north side of Chicago are where she should focus on searching a place to live.
- Most of the top 50 schools in Chicago will be found in this area.
- Venues found in the cluster have a wide variety of services such as restaurants, grocery stores, and activities for her daughter to enjoy.
- Ways to improve analysis
  - Filter Facebook data to include more children friendly venues
  - Include more restaurants they both enjoy.