



# **The Battle of Neighborhoods – Chicago Market Entry**

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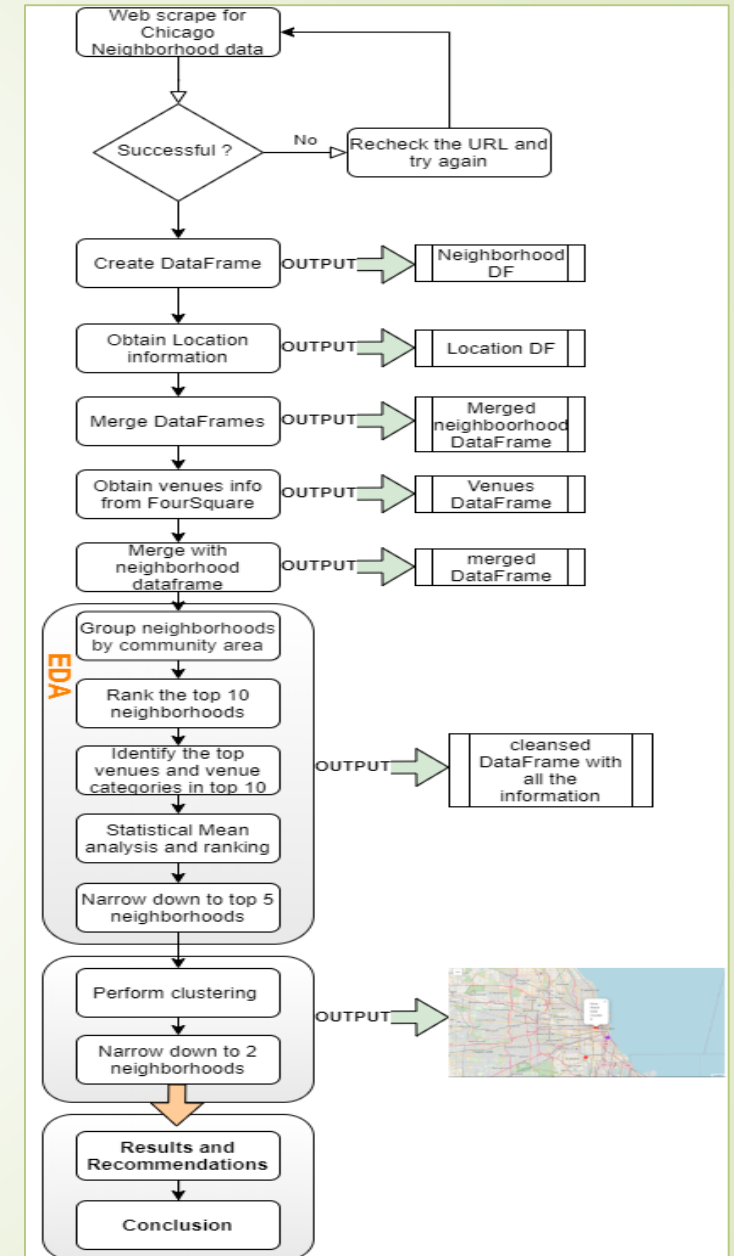


# Problem Statement

- Client planning to setup an **Indo Chinese** restaurant in Chicago
- Client wants us to identify **two potential neighborhoods** in Chicago that would be most suitable for him to perform a physical feasibility study and move forward

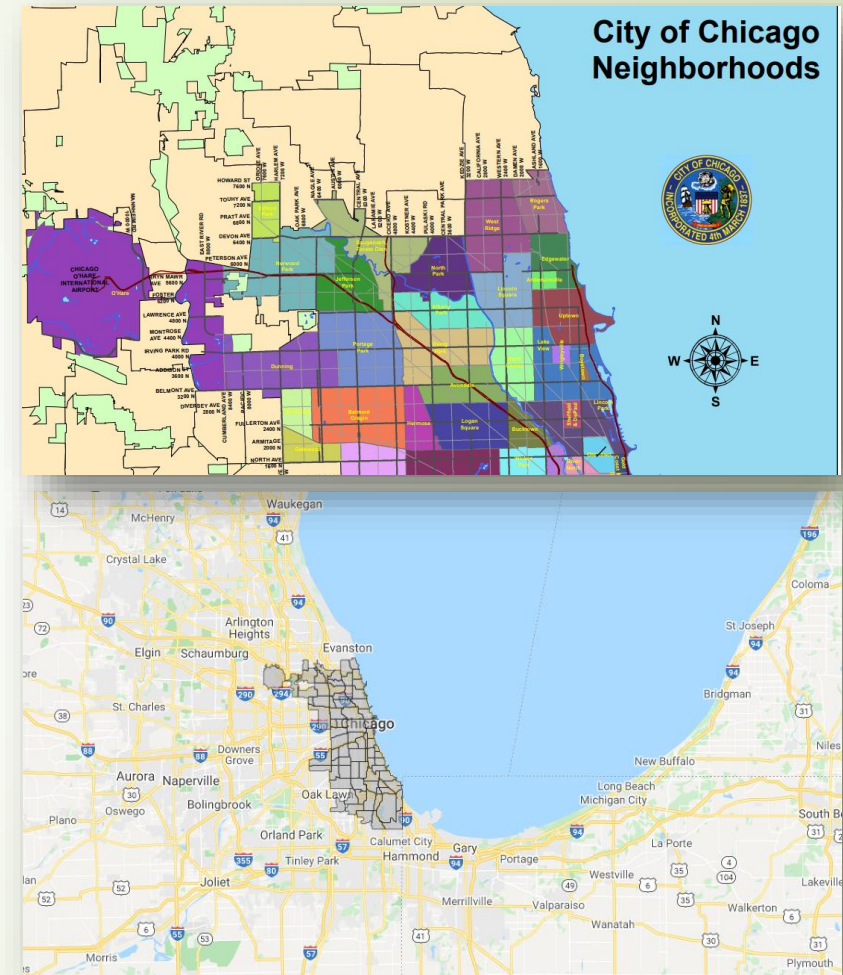
# Methodology

- Using the web and FourSquare, gather and analyze community areas, neighborhoods and top venues in these neighborhoods
- Using unsupervised machine learning k-means clustering algorithm to create neighborhood based venue categories
- Identify and narrow down 2 neighborhoods with fewer restaurant's



# Initial Observations

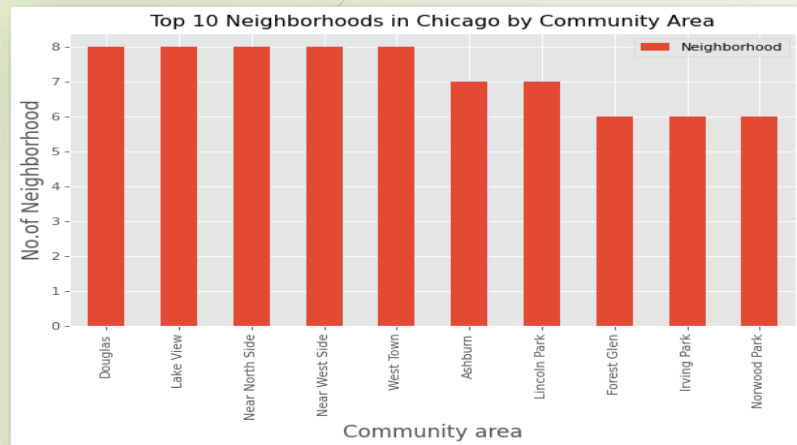
- There are 35 venues in 4 different neighborhoods
- There are 33 distinct venues in 26 categories
- There are more restaurant's in the Douglas neighborhood than other neighborhoods
- For all the narrowed down neighborhoods the first most common venue was a non-restaurant
- Some neighborhoods had no restaurant's at all in their top 8 venues



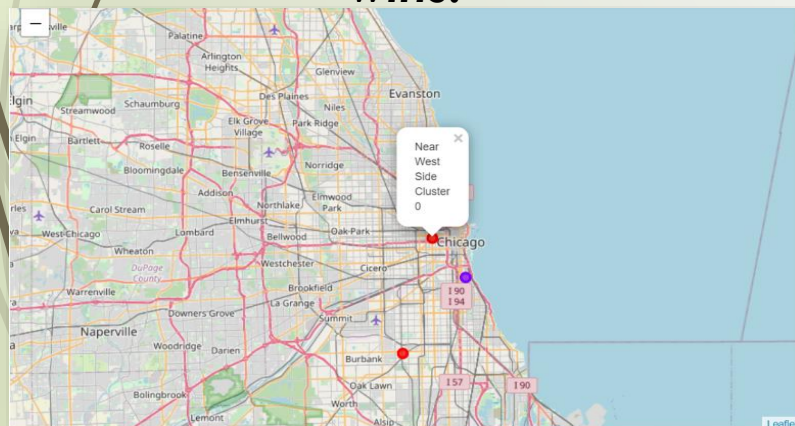


# Results

## Top 10 neighborhoods based on the community areas



## K-means cluster map – Cluster 0 wins!



## Top 4 neighborhoods based on statistical mean of the venues categories

	Neighborhood	American Restaurant	Bakery	Bank	Bar	Big Box Store	Burger Joint	Bus Station	Chinese Restaurant	Cocktail Bar	Coffee Shop	Donut Shop	Fried Chicken Joint	Gas Station	Grocer Stor
0	Ashburn	0.0	0.000000	0.071429	0.071429	0.071429	0.0	0.000000	0.000000	0.000000	0.071429	0.000000	0.000000	0.071429	0.14285
1	Douglas	0.0	0.000000	0.000000	0.000000	0.000000	0.0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000
2	Near West Side	0.0	0.071429	0.000000	0.000000	0.000000	0.0	0.071429	0.071429	0.071429	0.000000	0.071429	0.071429	0.000000	0.14285
3	West Town	0.2	0.000000	0.000000	0.000000	0.000000	0.2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000

## Top 4 neighborhoods based the most common venues

	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
0	Ashburn	Mobile Phone Shop	Mexican Restaurant	Grocery Store	Wings Joint	Gym / Fitness Center	Bank	Bar	Big Box Store
1	Douglas	Park	Wings Joint	Fried Chicken Joint	Bakery	Bank	Bar	Big Box Store	Burger Joint
2	Near West Side	Grocery Store	Hookah Bar	Karaoke Bar	Bus Station	Donut Shop	Fried Chicken Joint	Sandwich Place	Chinese Restaurant
3	West Town	History Museum	American Restaurant	Post Office	Burger Joint	Fried Chicken Joint	Bakery	Bank	Bar

# Conclusion

Cluster 0 wins!! - Near West Side & Ashburn
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- Based on the quantity and variety of venues, the 2 recommended neighborhoods for the client to perform their feasibility study are - **Near West Side & Ashburn**
- These 2 neighborhoods offer the most variety of venues, fewer restaurants and more so fewer similar restaurant's.