

Office move from Battery Park City, Manhattan to Chicago

LOCATING A SIMILAR OFFICE LOCATION IN CHICAGO

Relocation can be costly

It takes time out of leadership's day to locate a new office

Hiring and training new staff is expensive

- Having current staff move would be the preferred option

The current office location is considered ideal

Can a similar location to the current office be found in Chicago using machine learning?

Data Acquisition and Cleaning

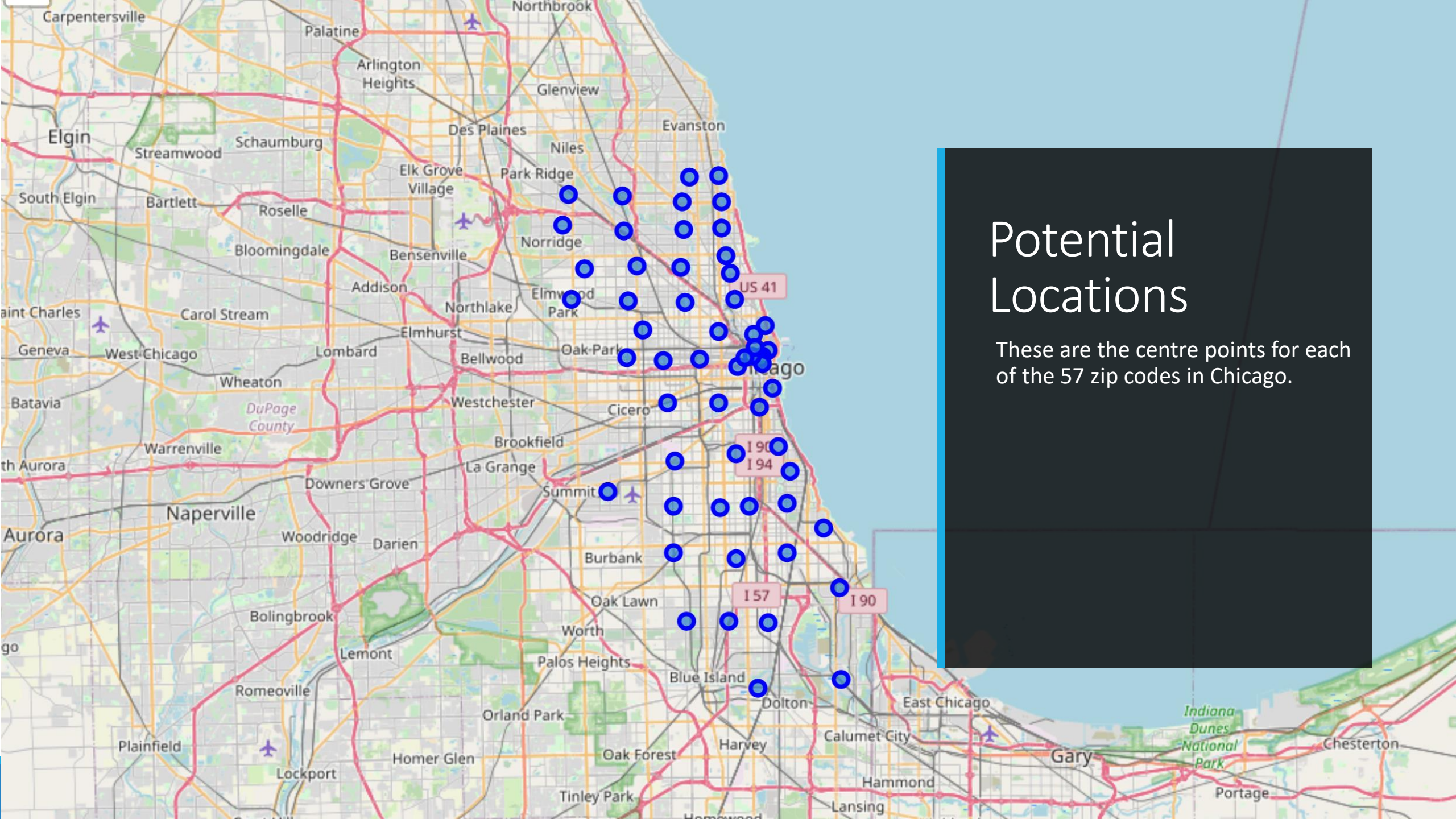
Chicago zip code data acquired from <https://www.dreamtown.com/maps/chicago-zipcode-map>

Zip code coordinates acquired from <https://public.opendatasoft.com/explore/dataset/us-zip-code-latitude-and-longitude/table/>

Venue data for zip code coordinates gathered using the FourSquare API

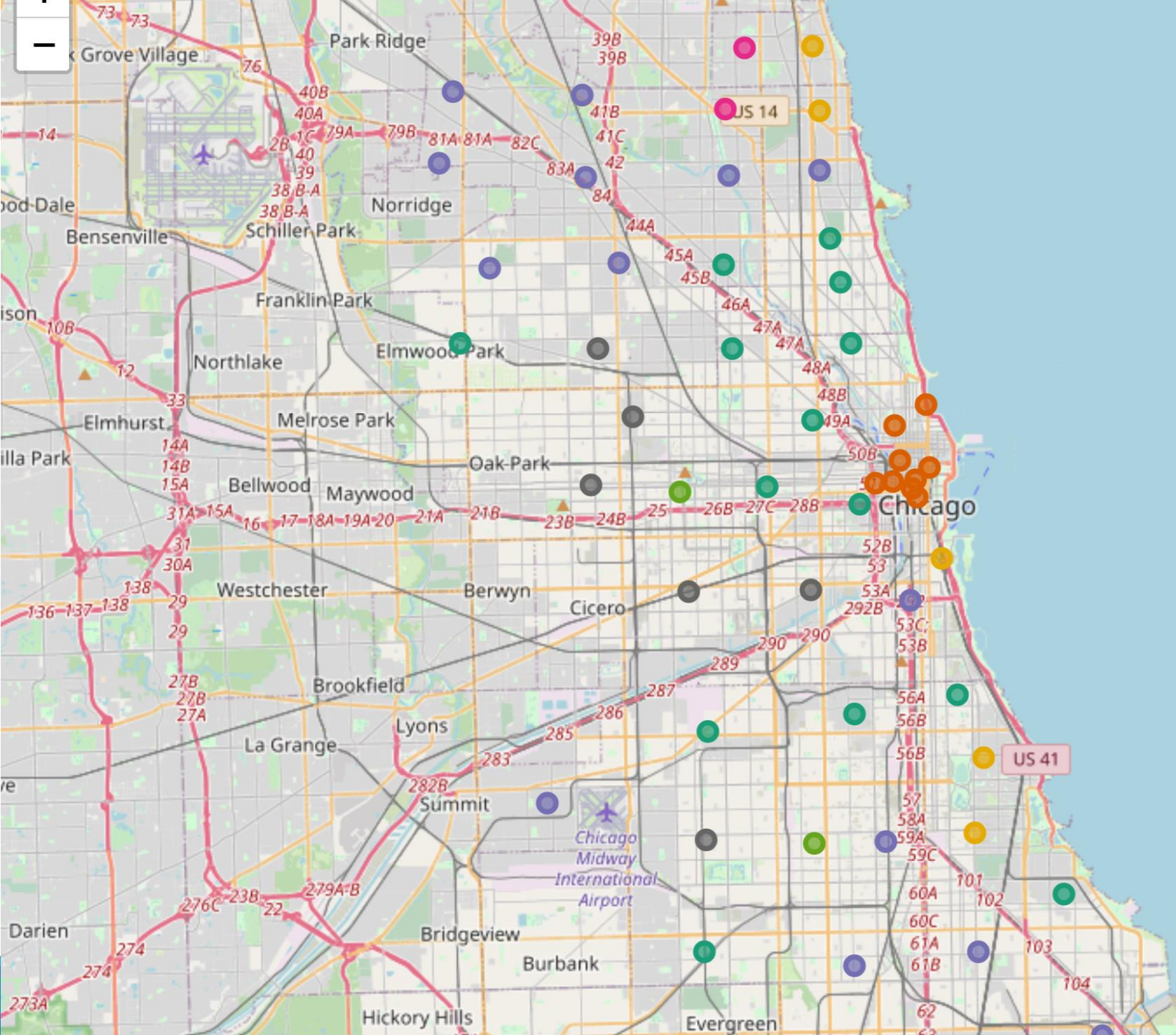
All data regarding Battery Park City has been previously acquired and repurposed

The final data set used for machine learning consisted of 58 locations (including Battery Park City) and 415 venue categories



Potential Locations

These are the centre points for each of the 57 zip codes in Chicago.

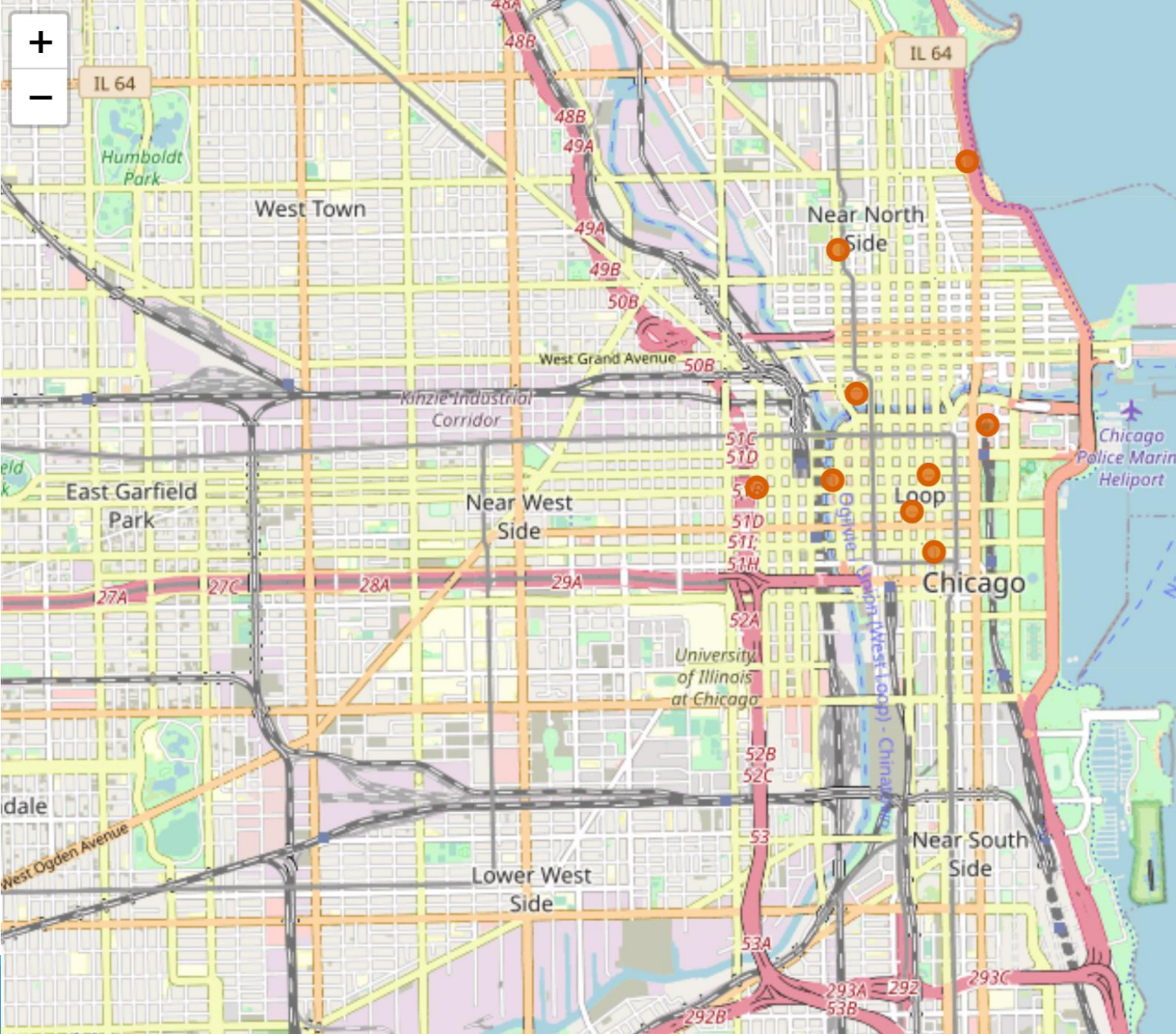


K Means Clustering

K Means Clustering was used to cluster each zip code and the Battery Park City data based on the frequency of each venue category.

The Battery Park City data was included in the model to determine which cluster in Chicago is the most similar.

The dark orange markers are considered to be the most similar.



K Means Clustering

9 zip codes were found to have similar venue frequencies to Battery Park City.

All 9 zip codes are in or near The Loop or Near North Side.

	Cluster	Location	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	Latitude	Longitude
0	3	60601	Hotel	New American Restaurant	Bar	Steakhouse	Park	Italian Restaurant	Grocery Store	Café	Salad Place	Theater	41.886456	-87.623250
1	3	60602	Hotel	Steakhouse	Park	Theater	Italian Restaurant	Coffee Shop	Bar	Seafood Restaurant	Mediterranean Restaurant	Donut Shop	41.882937	-87.628740
2	3	60603	Hotel	Park	New American Restaurant	Theater	Coffee Shop	Bar	Steakhouse	Italian Restaurant	Pizza Place	Donut Shop	41.880446	-87.630140
3	3	60604	Hotel	Coffee Shop	Park	Theater	Steakhouse	Grocery Store	Italian Restaurant	Pizza Place	Salad Place	Gastropub	41.877589	-87.628180
5	3	60606	Hotel	New American Restaurant	Italian Restaurant	Coffee Shop	Bar	Steakhouse	Donut Shop	Mexican Restaurant	Mediterranean Restaurant	Grocery Store	41.882582	-87.637600
9	3	60610	Steakhouse	Hotel	Pizza Place	New American Restaurant	Italian Restaurant	Restaurant	Mexican Restaurant	Bar	Gym / Fitness Center	Seafood Restaurant	41.898582	-87.637100
10	3	60611	Hotel	American Restaurant	New American Restaurant	Café	Pizza Place	Steakhouse	Restaurant	Grocery Store	Gym / Fitness Center	Coffee Shop	41.904667	-87.625040
48	3	60654	Hotel	Italian Restaurant	Steakhouse	Bar	Mediterranean Restaurant	Coffee Shop	New American Restaurant	Mexican Restaurant	Seafood Restaurant	Burger Joint	41.888627	-87.635380
54	3	60661	Coffee Shop	Hotel	Italian Restaurant	Steakhouse	New American Restaurant	Donut Shop	Pizza Place	Restaurant	Sandwich Place	Burger Joint	41.882082	-87.644610
57	3	Battery Park City	Park	Coffee Shop	Hotel	Clothing Store	Memorial Site	Playground	Gym	Boat or Ferry	Plaza	Sandwich Place	40.711932	-74.016869

Conclusion

There are 9 zip codes in Chicago that are considered similar to Battery Park City.

Three venue categories stand out among all 10 locations:

- Parks
- Coffee Shops
- Hotels
 - all locations (except 60610) include at least two of the three in the top 10 most common venues

These 3 venue types all indicate vibrant, exciting locations and could be found within The Loop or Near North Side.

Future work could include factoring in the cost of renting office space in each of the identified locations.