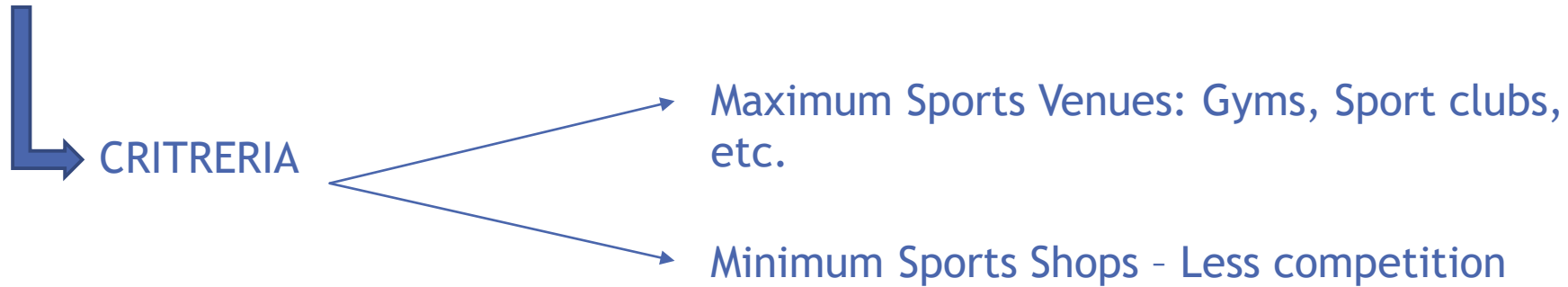# Capston Project: The Battle of Neighborhoods

Where to open a Sports Clothing and Goods Shop in the city of Mahattan?

Problem and Target:

Explore Manhattan Neighborhoods in order to choose which one is the best for the store.

CRITRERIA

Maximum Sports Venues: Gyms, Sport clubs, etc.

Minimum Sports Shops – Less competition

Target: anyone who is looking forward to open a new Sports Shop in Manhattan.

Data sources and cleaning

▶ Geographical coordinates of the negihborhoods in New York from https://cocl.us/new_york_dataset

▶ Info selected: Manhattan Neighborhoods and their coordinates

▶ Venues locations and categories in the neighborhoods selected

▶ Info selected: venues related to sports (Gyms, clubs, etc.) and venues related to sports shops (shopping malls included)

Methofology

▶ Data was grouped by neighborhood and then totalized

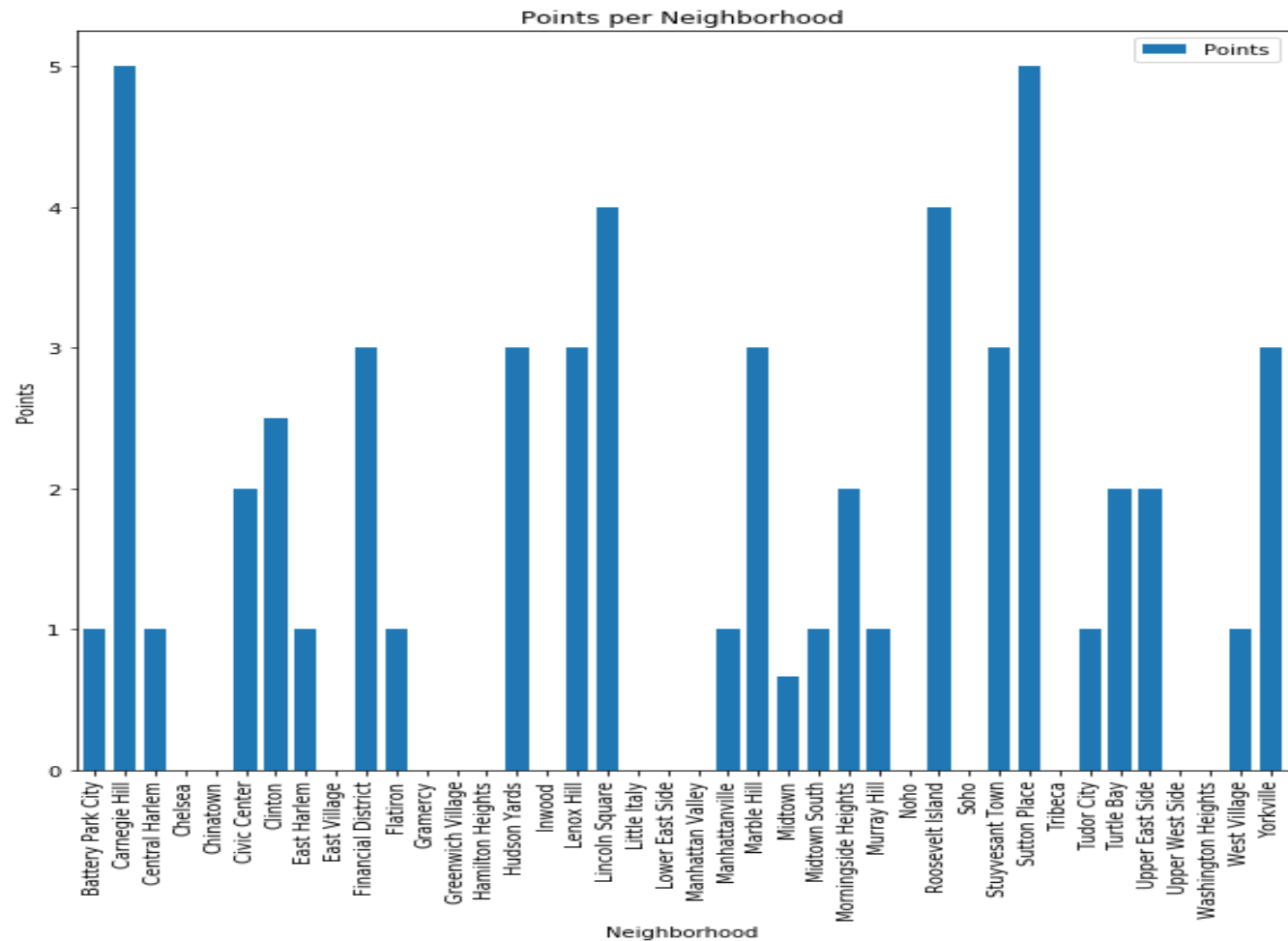|	Neighborhood	Total Sport Venues	Total Sport Shops
0	Battery Park City	2	1
1	Carnegie Hill	5	0
2	Central Harlem	1	0
3	Chelsea	0	0
4	Chinatown	0	0

- A Score system was established in order to detrmine which neighboroods where the most suitbale for the store, according to the critera.

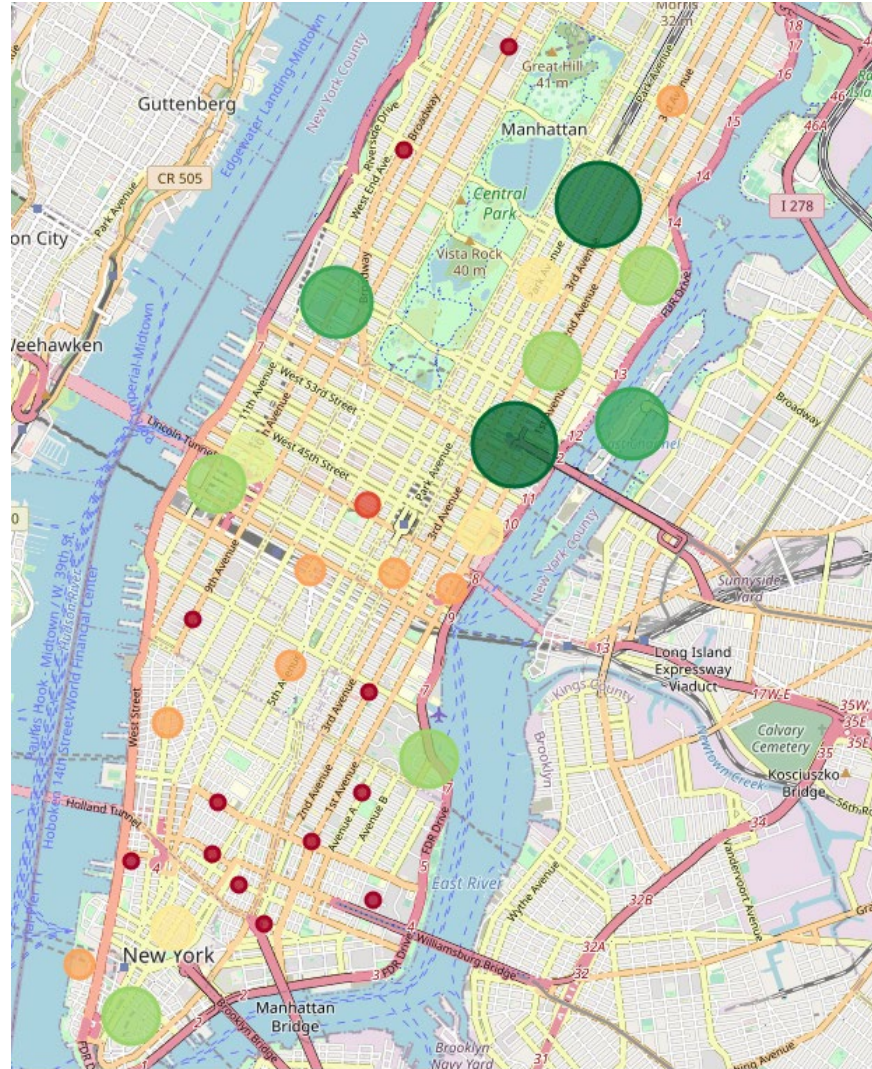$$NBH_{points} = \frac{Total\ Sport\ Venues}{Total\ Sport\ Shops + 1}$$

	Neighborhood	Total Sport Venues	Total Sport Shops	Points
0	Battery Park City	2	1	1.0
1	Carnegie Hill	5	0	5.0
2	Central Harlem	1	0	1.0
3	Chelsea	0	0	0.0
4	Chinatown	0	0	0.0

Results

Bar chart showing the points for each neghborhood

Map showing the location of the neighborhoods with markers colors and size accordig to their points

Conclusion

▶ According to the cirteria proposed, <u>Carnegie Hill</u> and <u>Sutton Place</u> are the two most suitable neighborhoods.

▶ In order to choose one of them or perhaps another with also a good score such as Linclon Square or Roosevelt Island, there ara another features that can be taken into account like the cost of renting or buying the place for example.