

# The Manhattan's Most Popular



# Introduction & Business Problem

**Background:** The City of New York is a city of most's:

- ▶ The most populous in the United States
- ▶ The financial capital of USA.
- ▶ Business opportunities leader and multicultural.
- ▶ The highest demand, market and vast opportunities.

**Problem Description:**

- ▶ Manhattan was chosen as a heart of the city, meaning also a high concentration of ventures.
- ▶ Popular places are not identical across the borough and each neighborhood has own rankings.

# Data

Based on definition of our problem, factors that influenced the recommendation were:

## ► List of Venues

- Venues refer to Manhattan - a borough in New York City. Data are located at [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset) and includes json file.
- Latitude, longitude will be obtained from Open Street Map APIs - an algorithm was used to determine the geodata from Nominatim.

## ► Venues Rating

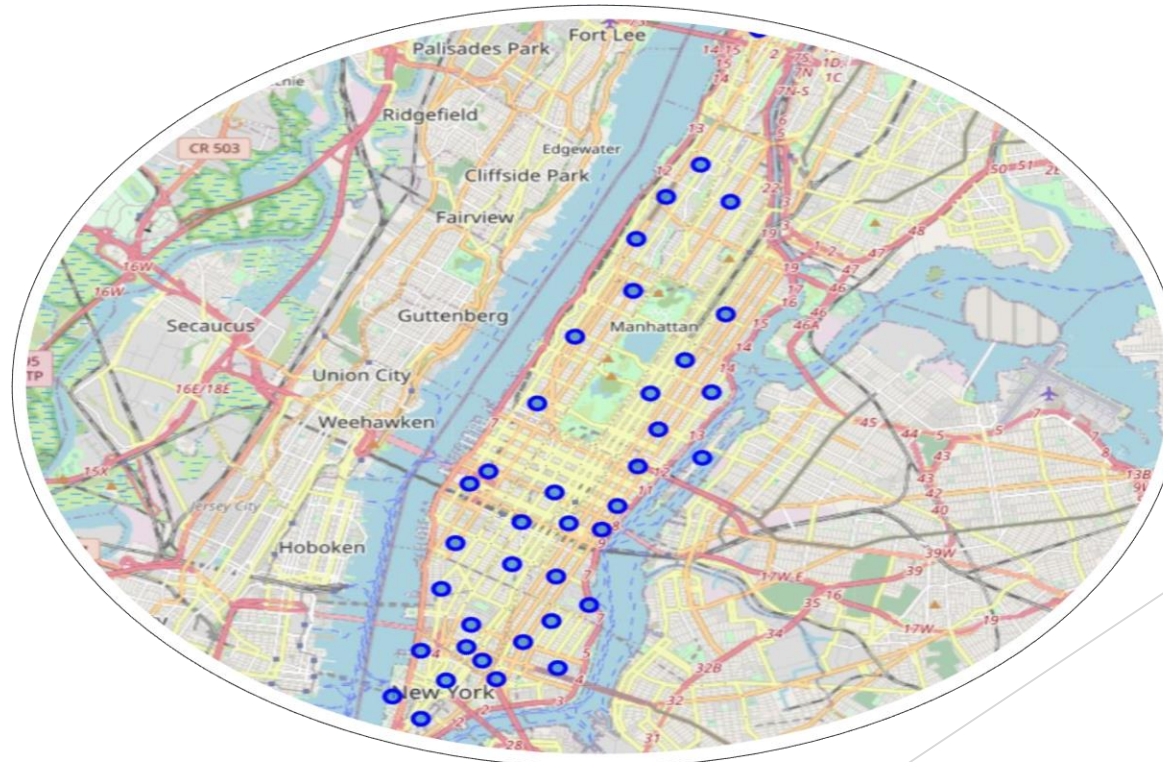
- For each venue its ranking will be identified using Foursquare.

# Methodology

- ▶ A data on NYC boroughs, neighborhoods and coordinates was gathered and compiled to dataset.

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806

- ▶ Dataset was used in order to both get to know Neighborhoods names and its location on map.



Depending on the borough, top venues were received, including their names, categories and geodata:

	name	categories	lat	lng
0	Arturo's	Pizza Place	40.874412	-73.910271
1	Bikram Yoga	Yoga Studio	40.876844	-73.906204
2	Tibbett Diner	Diner	40.880404	-73.908937
3	Starbucks	Coffee Shop	40.877531	-73.905582
4	Dunkin'	Donut Shop	40.877136	-73.906666

Each neighborhood was analyzed then in terms of categories:

	Neighborhood	Accessories Store	Adult Boutique	Afghan Restaurant	African Restaurant	American Restaurant	Antique Shop	Arcade	Arepa Restaurant	Argentinian Restaurant	Art Gallery	Art Museum	Arts & Crafts Store	Asian Restaurant	Athletics & Sports	Auditorium	Australian Restaurant
0	Marble Hill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	Marble Hill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Thus, a frequency of occurrence could be calculated.

Finally, a rating for each neighborhood was obtained.

Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue
Roosevelt Island	Park	Deli / Bodega	Coffee Shop	Sandwich Place
Clinton	Theater	Gym / Fitness Center	Coffee Shop	Wine Shop
Midtown	Hotel	Clothing Store	Coffee Shop	Theater
Murray Hill	Sandwich Place	Japanese Restaurant	Coffee Shop	Burger Joint
Chelsea	Art Gallery	Coffee Shop	Italian Restaurant	Ice Cream Shop
Morningside		American		

# Results & Discussion

- ▶ The most visited clusters were received. Location along Manhattan can be considered for opening a restaurants or other business depending on the idea.
- ▶ Clusters map shows different markers of places in their own clusters - results presents the most popular venues in each neighbourhood which can be chosen by chief.
- ▶ The analysis was done for Manhattan borough only. The same kind of analysis can be done for the entire of New York city too. This notebook can be used for similar kind of analysis for a different city.