

# Most ideal Neighbourhood in Manhattan to start a GYM

-Studying Manhattan Neighbourhood





# Overview

For a strategic Investment in a city there needs to be enough data points.. Our area of interest i.e Newyork city has 306 neighbours, of which Manhattan is our area of study. For a contractor It is very important to know what neighbourhood makes an ideal neighbourhood in manhattan for him to invest in.

We are using New york city data and foursquare API to explore the neighbourhoods.

Data considered will be neighbourhoods and its venue categories.






# Understanding the problems

This Project helps contractors to know what neighbourhood in Manhattan city is Ideal place to start a GYM.


Neighborhood has a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood. We will collect the data from the spatial data repository and try to understand the neighbourhoods and the shops and establishments around it. Of 5 boroughs we will consider the Manhattan neighbourhood as it is the area of interest for the contractors and businessman.





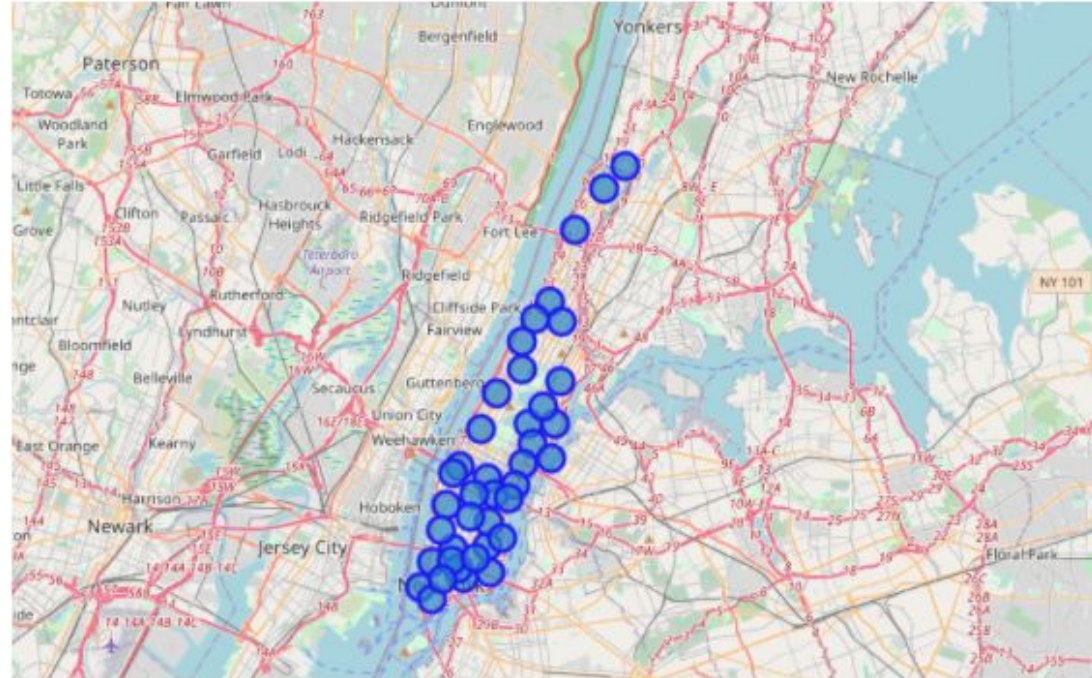
## HOW DATA IS USED TO SOLVE THE PROBLEM

Data of New York city will be segmented to analyse its neighbours. Manhattan city which is a borough of New York city will be considered for further analysis. Using the folium and foursquare APIs we will try to understand the distribution of neighbourhoods and shops/establishments in the neighbourhoods of Manhattan. So that we understand the number of gyms in each neighbourhood, and neighbourhood that do not have gyms but it might have other commercial establishments.



# Methodology

Neighbourhoods of Manhattan city:



The geographical coordinate of Manhattan are 40.7896239, -73.9598939.

## Places with Gym as most common venue

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
Marble Hill	Sandwich Place	Gym	American Restaurant	Coffee Shop	Yoga Studio	Deli / Bodega	Supplement Shop	Steakhouse	Seafood Restaurant
Battery Park City	Park	Hotel	Gym	Boat or Ferry	Memorial Site	Beer Garden	Gourmet Shop	Plaza	Food Court
Yorkville	Coffee Shop	Italian Restaurant	Gym	Bar	Deli / Bodega	Mexican Restaurant	Sushi Restaurant	Wine Shop	Japanese Restaurant
Clinton	Theater	Coffee Shop	Gym / Fitness Center	Gym	Wine Shop	Hotel	Italian Restaurant	Sandwich Place	Pizza Place
Flatiron	Gym / Fitness Center	Italian Restaurant	Park	Cosmetics Shop	Gym	Outdoor Sculpture	Yoga Studio	Wine Shop	Camera Store
Soho	Italian Restaurant	Mediterranean Restaurant	Coffee Shop	Art Gallery	Gym	Spa	Café	Clothing Store	French Restaurant
Greenwich Village	Italian Restaurant	Coffee Shop	Café	Bakery	Sushi Restaurant	Gym	Wine Bar	Dessert Shop	Comedy Club
Sutton Place	Italian Restaurant	Gym / Fitness Center	Park	Coffee Shop	Bagel Shop	Gym	Mexican Restaurant	Latin American Restaurant	Hotel



# Observations

- Size of the resulting data frame for all the venues present: (2984, 7)
- There are 321 Unique categories.
- All together for all 40 neighbors it is 2984.
- Of 321 unique categories , 25 categories have most common places in the locality is considered most happening if an area has at least 10 of these venues in their locality.
  - If areas have atleast below 10 venues, it is an ideal place for a Gym.  
Italian Restaurant, Theatre, wine shop, Bakery,  
Japanese/sushi restaurant, Pizza and sandwich place, cafe,  
American restaurant, yoga studio, park.
- Following have most common places as above in their neighbourhood and also they already have few gyms around them,

Neighborhood
Marble Hill
Battery Park City
Yorkville
Clinton
Flatiron
Soho
Greenwich Village
Sutton Place



# Results

Understanding the varied data generated and the distribution of venues in neighbourhood,  
And their popularity with top venues in and around, following are the Ideal venue spots for 'Gym'

Neighborhood
Central Harlem
Chelsea
East Harlem
Murray Hill
Roosevelt Island
Upper West Side





**Thank you!**