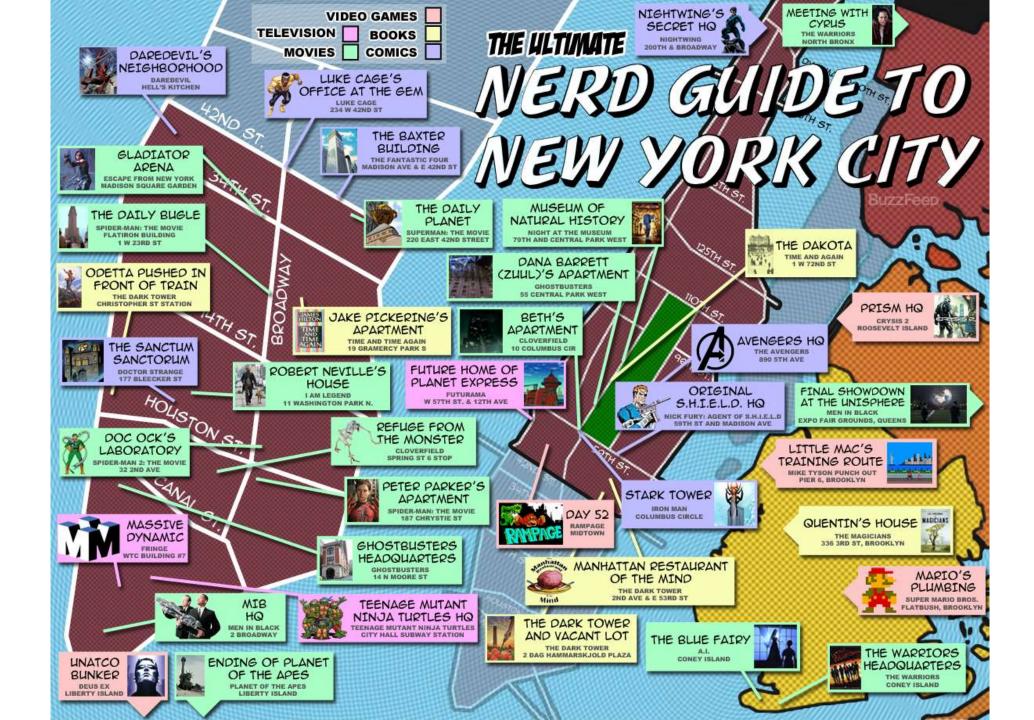
NERD GUIDE TO NEW YORK CITY





INTRODUCTION

Although traveling is a pure joy, preparing it is full of agony

- Visiting New York City on a budget might sound a bit far-fetched for some travelers, but with a little careful planning, you can have a successful trip to NYC on any budget.
- While New York City is known to be one of the world's most expensive cities, there are plenty of ways to have an incredible trip without breaking the bank. One of my favorite ways to explore city, venues, budget hotels is always through checking with <u>Foursquare</u>

Aim: This project is aimed to make your travel experience to New York Simple by Providing all nearby locations, local areas, hotels, best places to visit in new York with help of Foursquare datasets.

Overview of How it Works:

- Foursquare API provides great amount of quality data's about locations.(cafe, restaurant etc)
- Using this data will allow tourists to easily decide where to go when they are in a specific city.

OBJECTIVES:

• First of all, the geojson data for each city's neighborhood is required.

• Then, analyzing the data using the Foursquare API.

• Use clustering to identify each area and its category.

GEOGRAPHICAL DATA (Data frame)

	Neighborhood	Latitude	Longitude		
0	Wakefield	40.8947	-73.8472		
1	Co-op City	40.8743	-73.8299		
2	Eastchester	40.8876	-73.8278		
3	Fieldston	40.8954	-73.9056		
4	Riverdale	40.8908	-73.9126		
5	Kingsbridge	40.8817	-73.9028		
6	Marble Hill	40.8766	-73.9107		
7	Woodlawn	40.8983	-73.8673		
8	Norwood	40.8772	-73.8794		
9	Williamsbridge	40.881	-73.8574		
10	Baychester	40.8669	-73.8358		
11	Pelham Parkway	40.8574	-73.8548		
12	City Island	40.8472	-73.7865		
13	Bedford Park	40.8702	-73.8855		
14	University Heights	40.8557	-73.9104		
15	Morris Heights	40.8479	-73.9197		
16	Fordham	40.861	-73.8964		
17	East Tremont	40.8427	-73.8874		
18	West Farms	40.8395	-73.8777		
19	High Bridge	40.8366	-73.9261		
20	Melrose	40.8198	-73.9094		
21	Mott Haven	40.8062	-73.9161		
22	Port Morris	40.8017	-73.9132		

RESULT

• Using techniques such as K-means clustering, I was able to get results about common venues in city.

 This information can be really helpful to tourists since they can focus on what they are trying to experience most during their Travel .(Food, culture, sport etc)

• These techniques also provides the visualization of clustering of city.

Results of common venues of New York city

	Borough	Neighborhood	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Mos Commo Venu
o	Bronx	Wakefield	40.8947	-73.8472	3	Food Truck	Caribbean Restaurant	Ice Cream Shop	Pharmacy	Dessert Shop	Sandwich Place
1	Bronx	Co-op City	40.8743	-73.8299	3	Pizza Place	Bus Station	Mattress Store	Shopping Mall	Trail	Gift Shop
2	Bronx	Eastchester	40.8876	-73.8278	0	Caribbean Restaurant	Diner	Deli / Bodega	Donut Shop	Bus Station	Fast Food Restaurant
3	Bronx	Fieldston	40.8954	-73.9056	0	River	Rock Club	Plaza	Women's Store	Filipino Restaurant	Event Service
4	Bronx	Riverdale	40,8908	-73.9126	0	Park	Bank	Gym / Fitness Center	Gym	Bus Station	Plaza
5	Bronx	Kingsbridge	40,8817	-73.9028	3	Pizza Place	Sandwich Place	Discount Store	Supermarket	Latin American Restaurant	Bar
6	Manhattan	Marble Hill	40.8766	-73.9107	4	Discount Store	Yoga Studio	Diner	Shoe Store	Seafood Restaurant	Gym
7	Bronx	Woodlawn	40.8983	-73.8673	3	Deli / Bodega	Food & Drink Shop	Bar	Playground	Pizza Place	Indian Restaurant
8	Bronx	Norwood	40.8772	-73.8794	3	Pizza Place	Park	Bank	Bus Station	Pharmacy	Fast Food Restaurant
9	Bronx	Williamsbridge	40.881	-73.8574	3	Soup Place	Bar	Caribbean Restaurant	Nightclub	Women's Store	Eye Doctor
10	Bronx	Baychester	40.8669	-73.8358	4	Spanish Restaurant	Supermarket	Gym / Fitness Center	Mattress Store	Fast Food Restaurant	Sandwich Place
11	Bronx	Pelham Parkway	40.8574	-73.8548	4	Italian Restaurant	Chinese Restaurant	Pizza Place	Sandwich Place	Bus Station	Performing Arts Venue
12	Bronx	City Island	40.8472	-73.7865	3	Harbor / Marina	Thrift / Vintage	Seafood Restaurant	Spanish Restaurant	Pizza Place	Sandwich Place

Clustering Of New York City

