

**THE BATTLE OF NEIGHBORHOODS
FINDING THE BEST NEIGHBORHOOD
IN NEW YORK**

Introduction

Recently, one of my client has approached me to find out the most suitable place in New York to live.

He wants to move to the most happening place in New York.

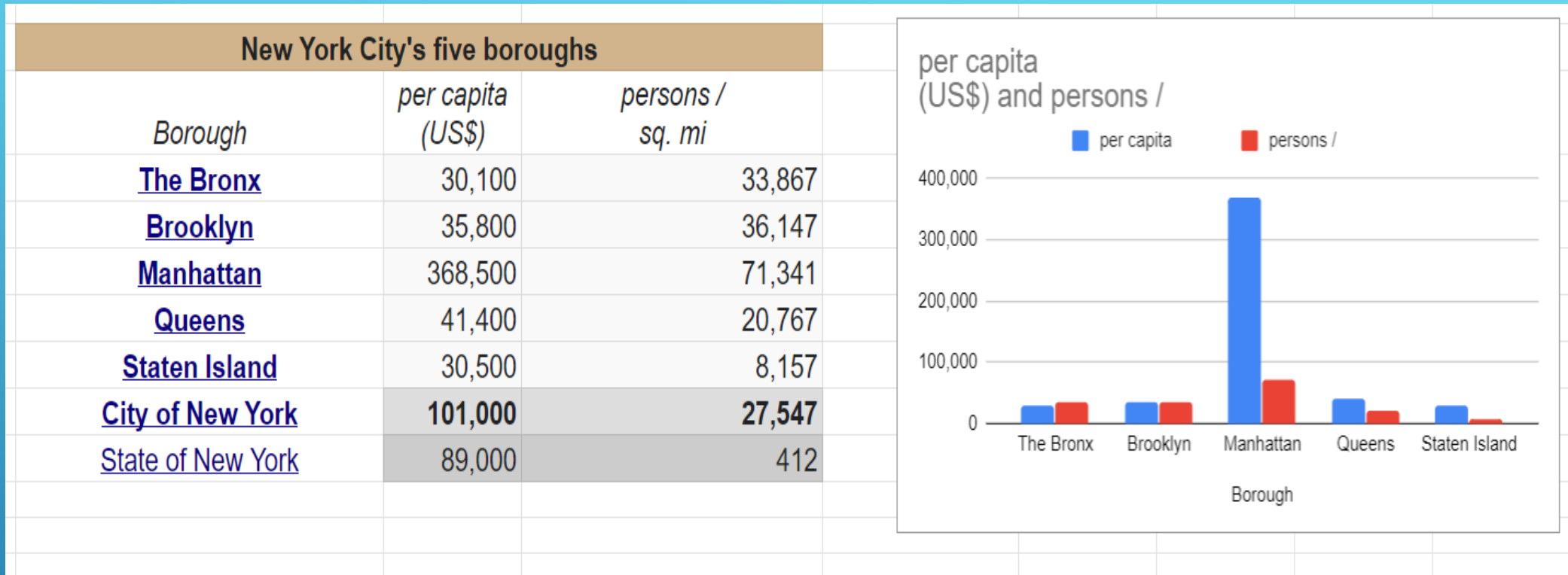
NEW YORK CITY – MANY FACETS





FIVE BOROUGHES OF NEW YORK CITY

- QUEENS
- BROOKLYN
- MANHATTEN
- BRONX
- STATEN ISLAND




PER CAPITA INCOME & POPULATION DENSITY

BUSINESS PROBLEM

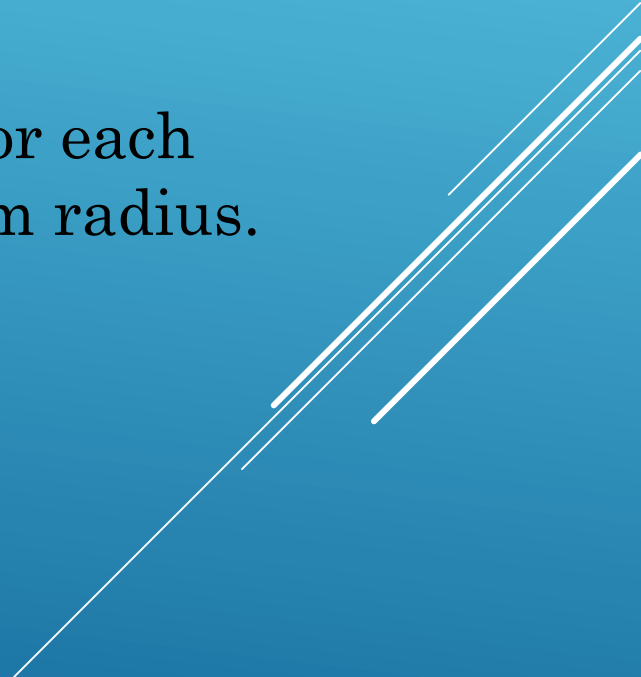
Given that there are many neighbourhoods in New York

- Exploring the neighbourhoods
- Using the Foursquare API to analyse
- Find the most sought after, trendy, popular and commented venues.

DATA COLLECTION

- Data is sourced from Wikipedia
 - Take the services of Foursquare and their free API feed
 - Data to include information about the places around each neighbourhood
 - i. Restaurants, hotels, coffee shops
 - ii. Parks, theatres, art galleries
 - iii. Museums and many more.
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DATA PREPARATION

- Suitable Web scraping tools including BeautifulSoup.
 - Using Foursquare API, a large database of nearby venues for each neighborhood in JSON format is sourced for a radius of 5 km radius.
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METHODOLOGY

FIRST, THE FOURSQUARE API WAS UTILIZED

FOURSQUARE API GIVES BASIC GEOGRAPHICAL LOCATION INFORMATION AND PARTICULAR VENUES

FOR THIS, SPECIFIC CREDENTIALS CLIENT ID AND SECRET, THE REQUIRED FOURSQUARE DATA CAN BE ACCESSED.

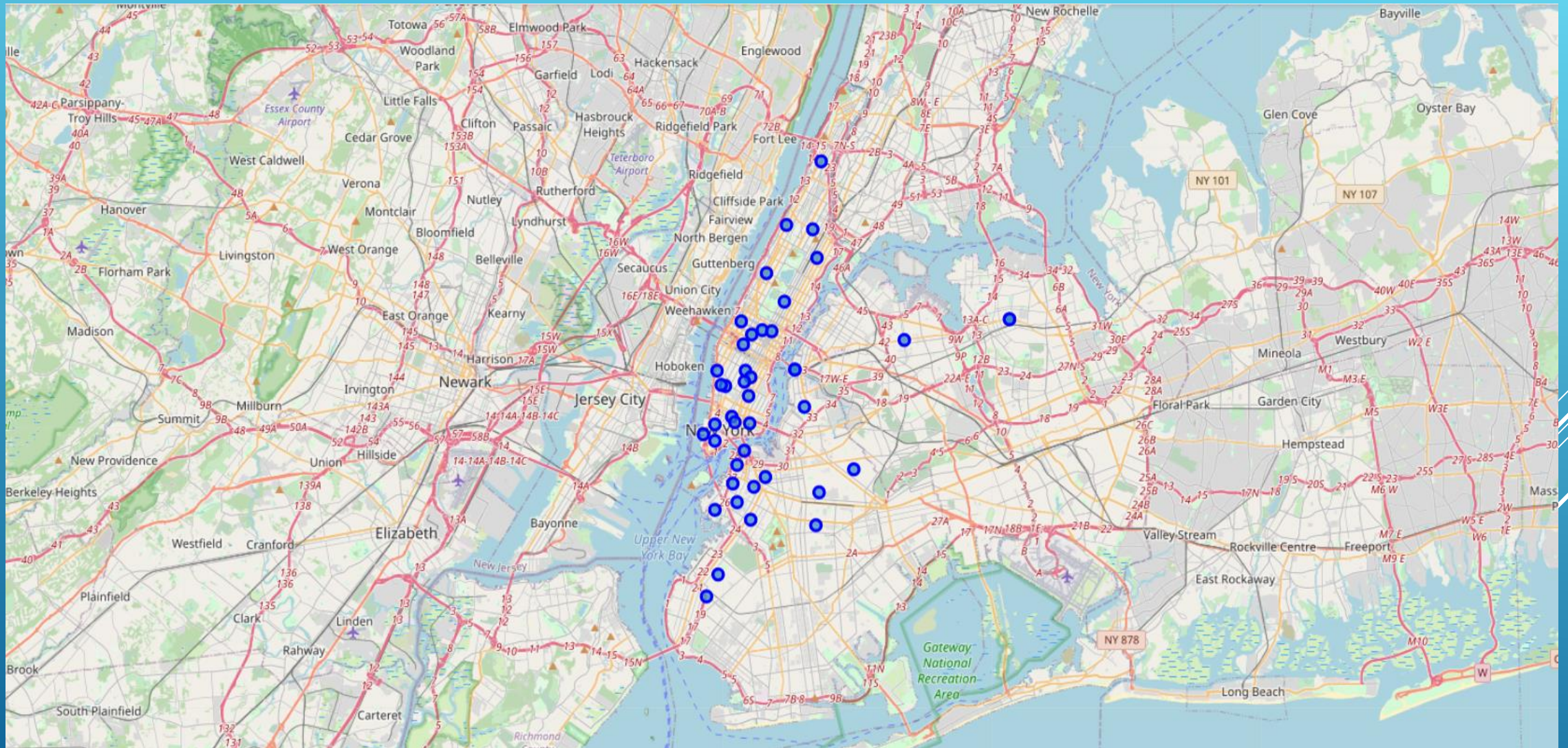
SECOND, FOLIUM IS USED WHICH IS A GREAT VISUALIZATION LIBRARY

THE MAP CAN DIRECTLY SHOW US THE OVERALL SHAPE OF THE PLACE

THE DETAILED INFORMATION ON DIFFERENT VENUES SUCH AS RESTAURANTS CAN BE SEEN IN A DIRECT WAY


THIRD, THE FAMED K MEANS CLUSTERING IS USED TO ANALYSE CLUSTERS IN NY CITY

ALL 4 CLUSTERS USED WITH A $K=4$ IS LISTED IN THE PROJECT.



CONCLUSION

After doing the K means clustering and other analysis described in the python notebook we are of the Opinion that the person should reside in cluster 1. This is because the person wants to live in a happening place nearby. Cluster one has all the facilities the client is looking for.

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