

Introduction

Seattle, Washington is the place where I reside and is commonly known for its coffee culture and numerous coffeehouses from corporate chains to independently owned shops. Let's say My wife and I are planning a trip to New York city. If we want to visit as many coffee shops as possible without moving too far which neighborhood should we go? This project will show which neighborhood to visit and mark the location and ratings for all the coffee shops in that neighborhood. People who love coffee or any other food as we can change the category to a desired food and travel agencies would be interested in this project.

Data

I will use the New York City data obtained from http://cocl.us/new_york_dataset which includes information about neighborhoods, boroughs, latitudes and longitudes. These data will be structured into data frames and combined with data from Foursquare to evaluate number of coffee shops per neighborhood and identify their location and ratings.

Methodology

The data collected from http://cocl.us/new_york_dataset will be structured into a data frame #1.

Data frame #2 is created using Foursquare api containing number of coffee shop per borough.

Plot number of coffee shops for each borough in New York city to identify the borough with highest number of coffee shops which is Manhattan.

I created data frame # 3 that only contain Manhattan information by grouping data frame #1.

Data frame #4 is created using Foursquare api to receive ratings of coffee shop.

Merge data frame #3 and #4 to plot location and ratings on map.

Results

I found out that Manhattan has the most coffee shops in New York (figure 1).

Number of Coffee shops for each Borough in New York City

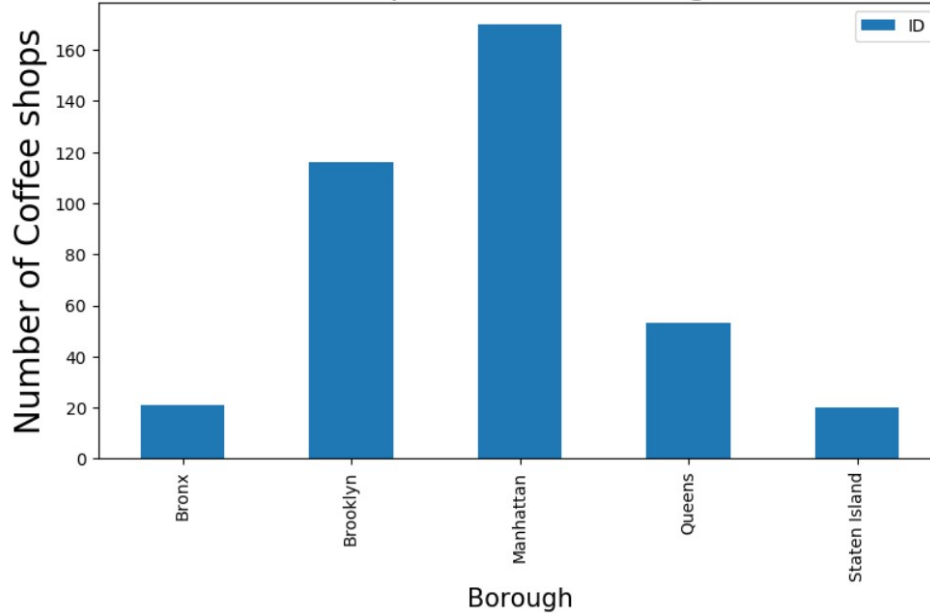


Figure 1. Top five number of Coffee shops for each borough in New York.

In Manhattan, Chelsea and Midtown has the most shops per neighborhood which is nine shops followed by Financial district and Lenox Hill with eight shops per neighborhood (figure 2).

Number of Coffee shops for each Neighborhood in Manhattan

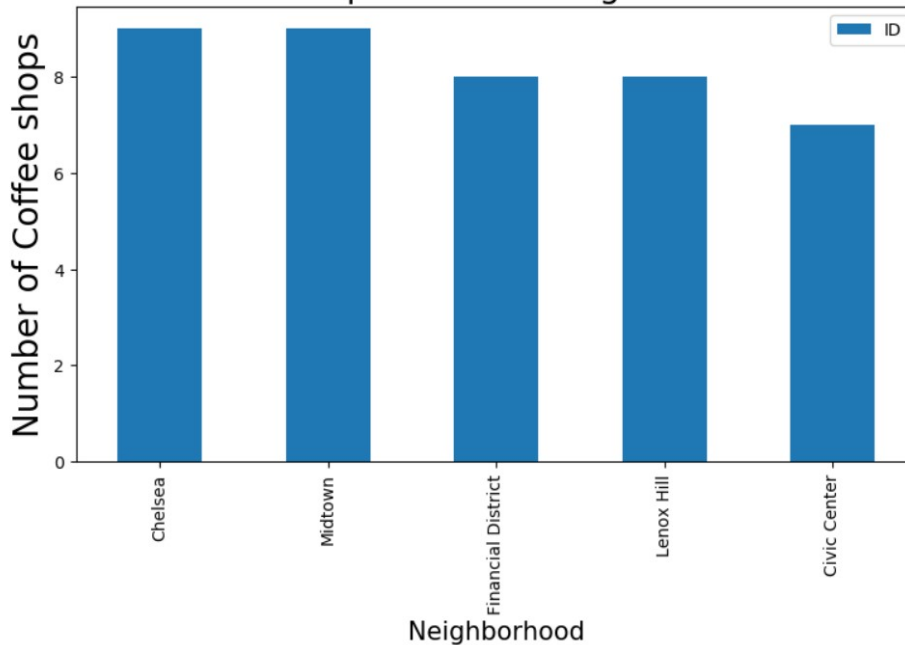


Figure 2. Top five number of Coffee shops for each neighborhood in Manhattan.

Top five average rating of coffee shops per neighborhood in Manhattan is Midtown south with 8.95/10, Greenwich village with 8.87/10, East village with 8.80/10, Soho with 8.79/10 and West village with 8.78/10 (figure 3). Chelsea and Midtown ,neighborhood with highest number of coffee shops, has a rating of 8.51/10 and 8.6/10.

Average Rating of Coffee Shops for each Neighborhood in Manhattan

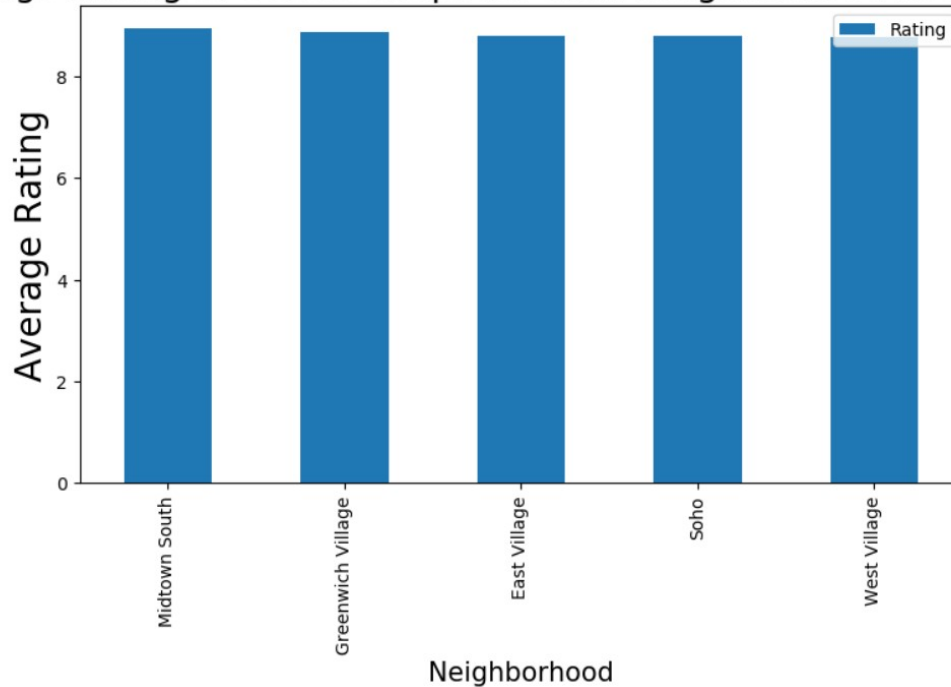


Figure 3. Top five Avg. rating of coffee shops for each neighborhood in Manhattan.

Every coffee shop in Manhattan with rating greater than 6 has their location and rating marked on the map (figure 4 & 5).

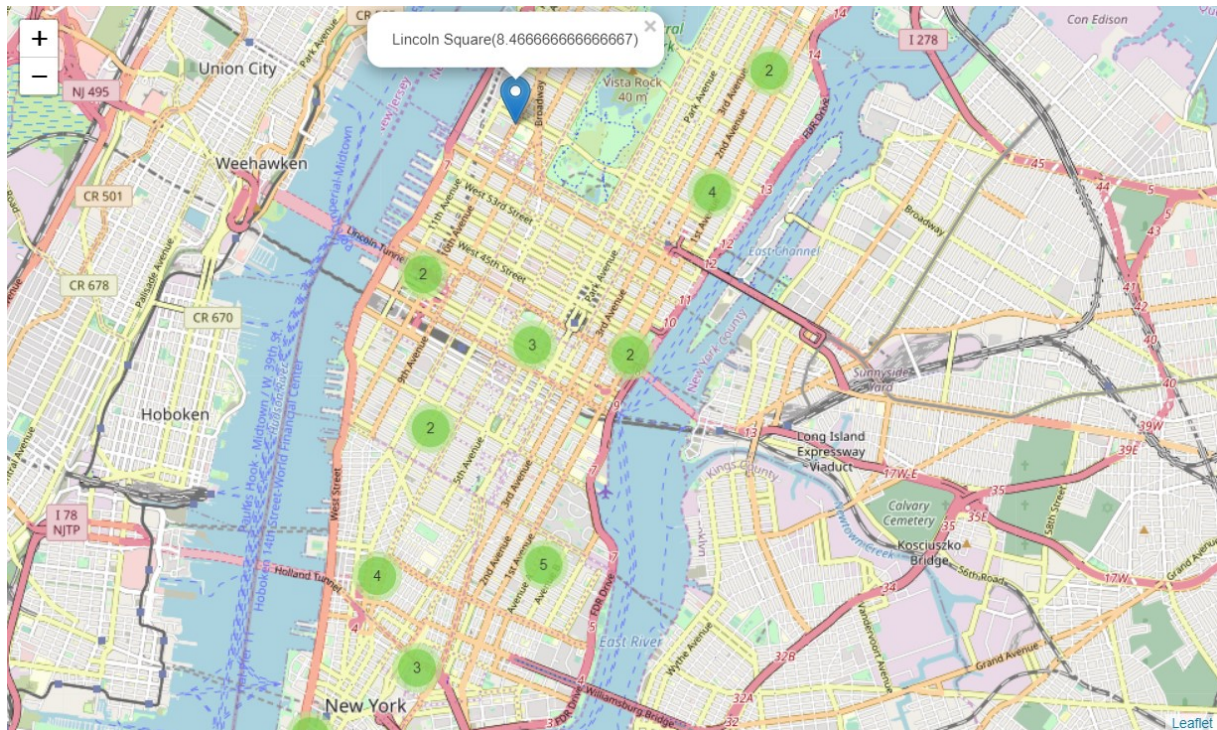


Figure 4. Every coffee shop in Manhattan with rating greater than 6

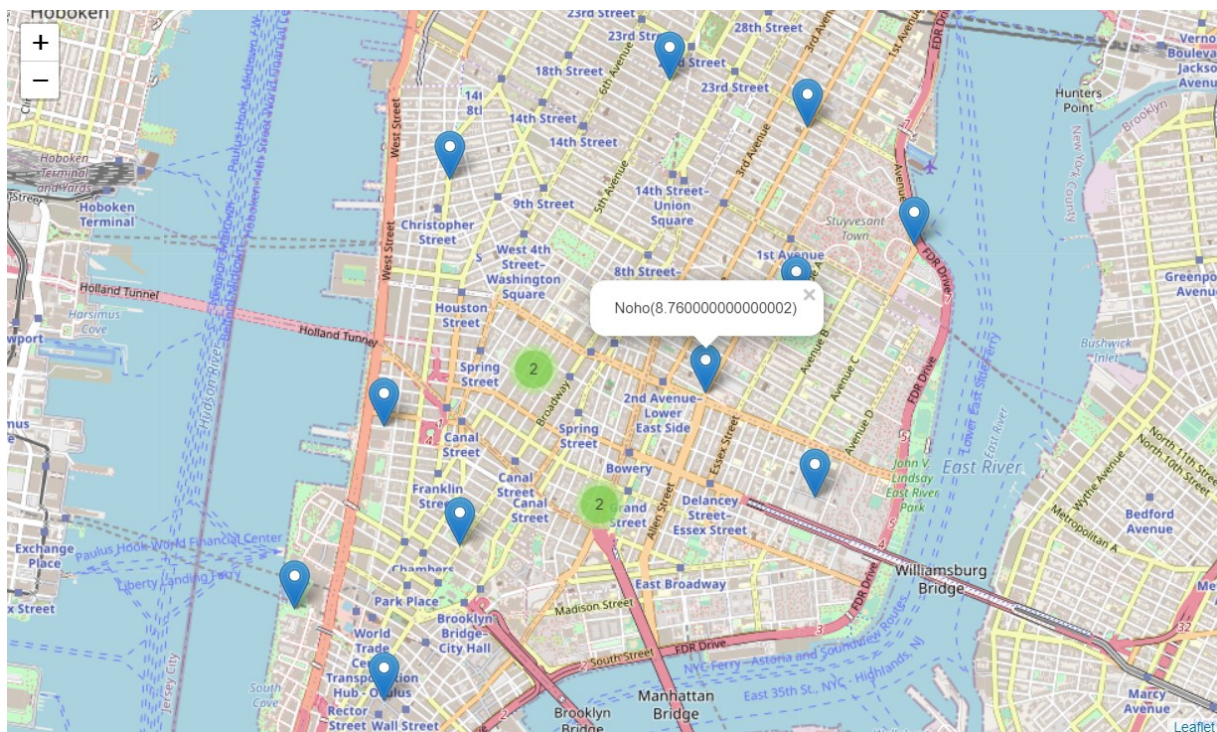


Figure 5. Every coffee shop in Manhattan with rating greater than 6 (zoom in)

Discussion & Conclusion

As we can see, Manhattan has the highest number of coffee shops than any other borough in New York. Anyone who plans to visit New York for coffee with minimum travel distance, Manhattan specifically Chelsea and Midtown are the place to go. Both neighborhood has the highest number of coffee shops than any other neighborhood and it has a high average rating.

Ratings for each coffee shop is provided by Foursquare alone so if we can gather ratings from multiple sources the result could be more accurate.