

How to Select Good Location When Open a Restaurant in Manhattan

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Location , Location and Location

Location data becomes more and more important in any business.

- Traditional approaches are time consuming and limited to small areas without seeing the whole picture.
- it is advantageous for business owners to use location data to view and know how many restaurants, where are they located?
- business owners related to food industry would be very interested in how location data to help them for competitive advantage and business values.

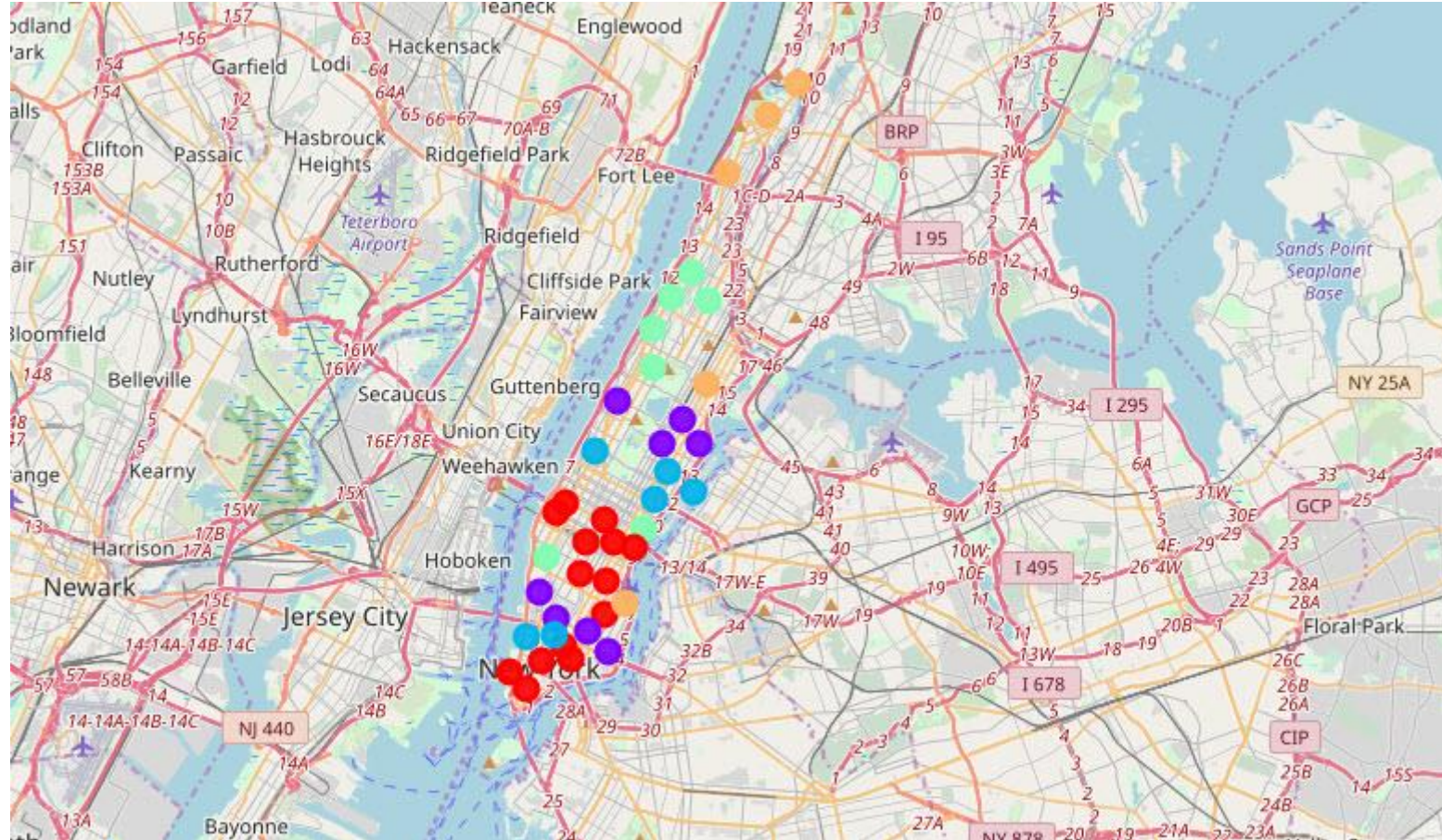
Data acquisition and cleaning

- Neighbourhood data for City of Manhattan:
https://cocl.us/new_york_dataset
- Restaurant data for City of Manhattan: Foursquare API
- Neighbourhood Population data for City of Manhattan:
www.worldatlas.com/articles/manhattan-neighborhoods-by-population.html
- Manhattan subway station location:
<http://web.mta.info/developers/data/nyct/subway/Stations.csv>

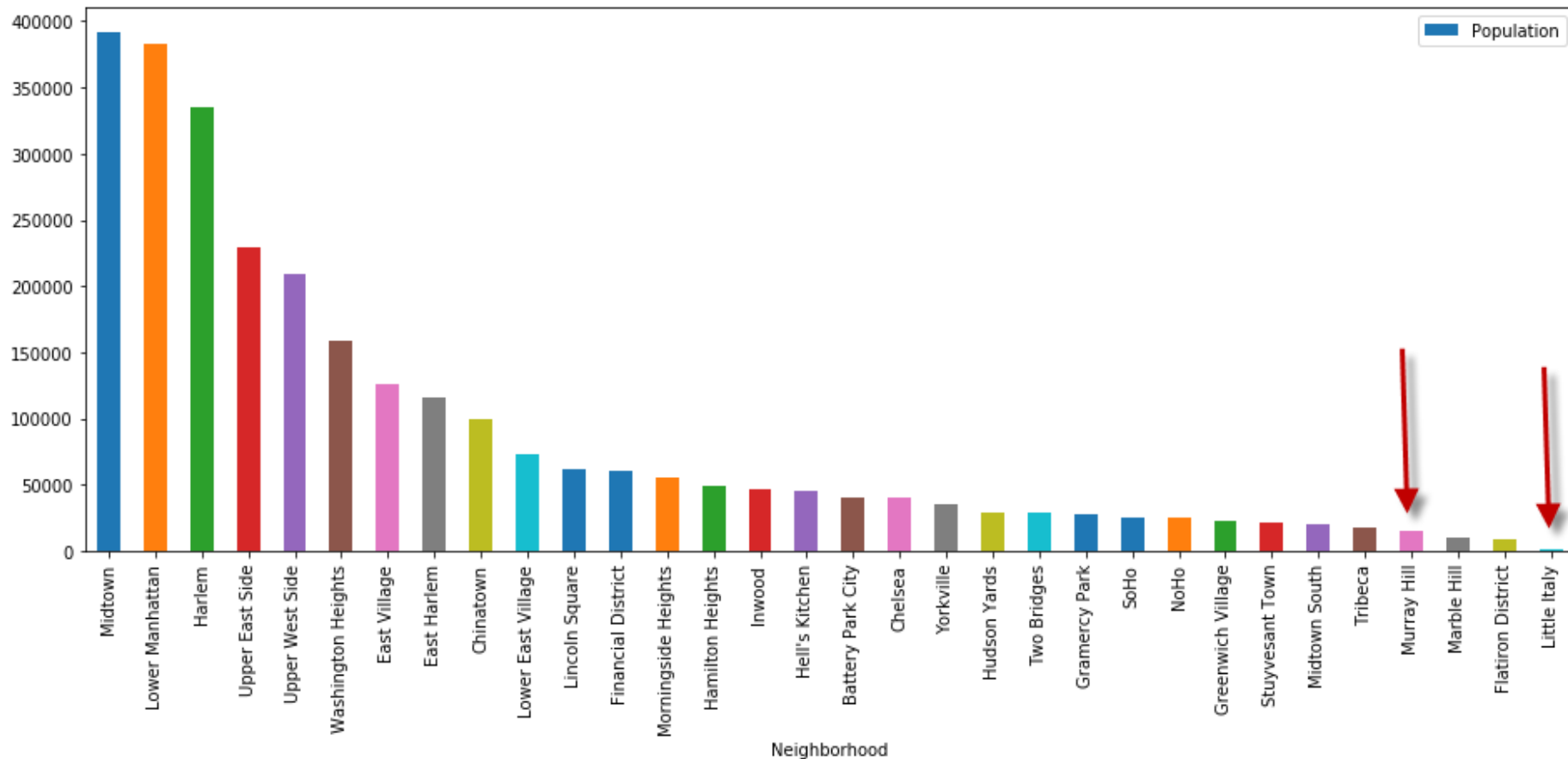
How to select data related to Restaurant?

- Key words search is used to decide if Venue is related to Restaurant or not. Those key words are: Pizza, Restaurant, Diner, Steakhouse, Sandwich, Noodle House, Bistro, Veterinarian, Taco Place, Burrito Place, Salad Place.
- Those are not selected : Coffee, Donut, Food & Drink Shop, Cafeteria, Frozen Yogurt Shop, Dessert Shop, Bagel Shop, any category related to Bar, e.g. Sake Bar, Cocktail Bar, Snack Place, Juice Bar, Beer Bar.

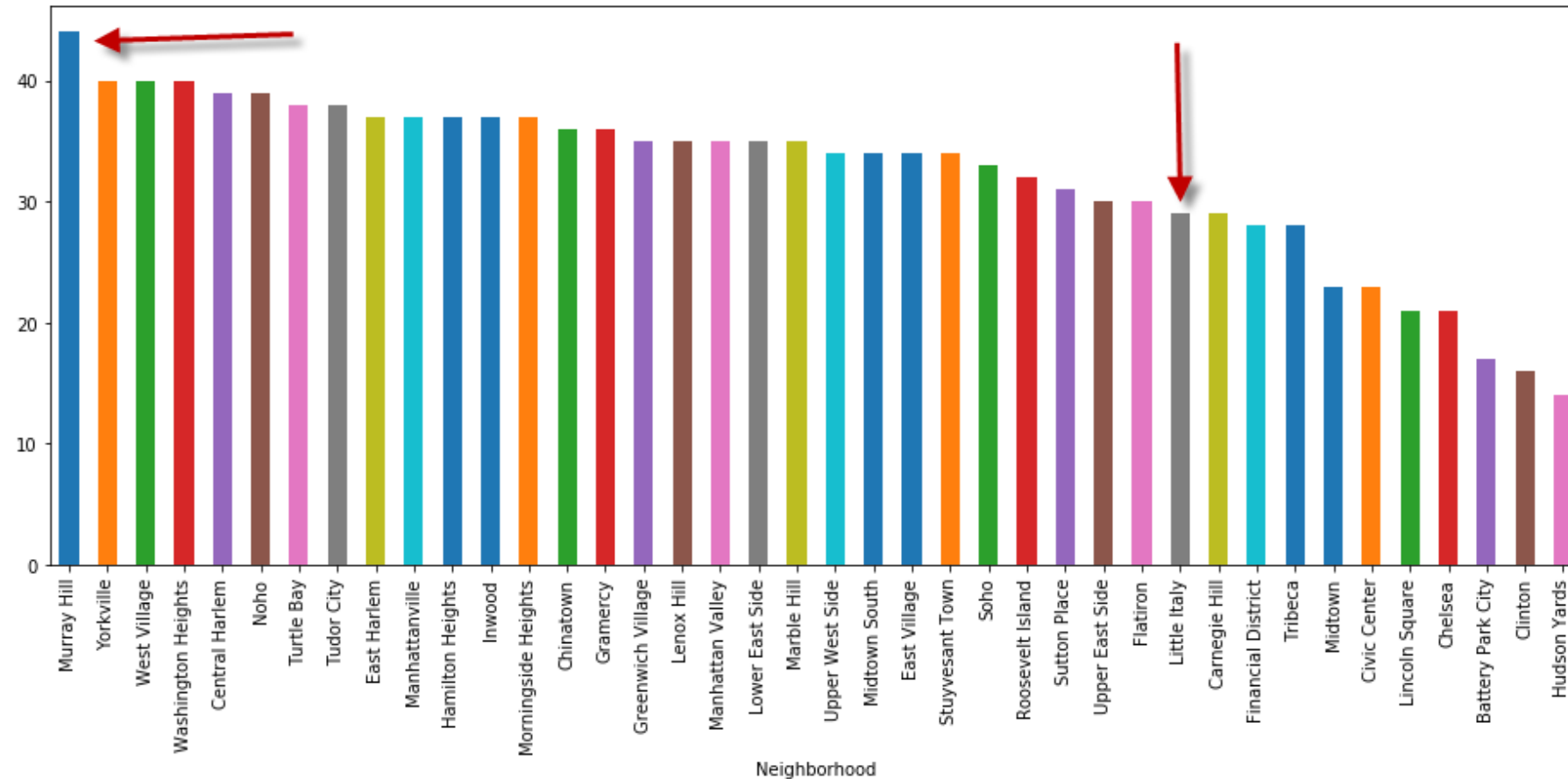
Cluster Neighborhoods based on restaurant information (5 clusters)



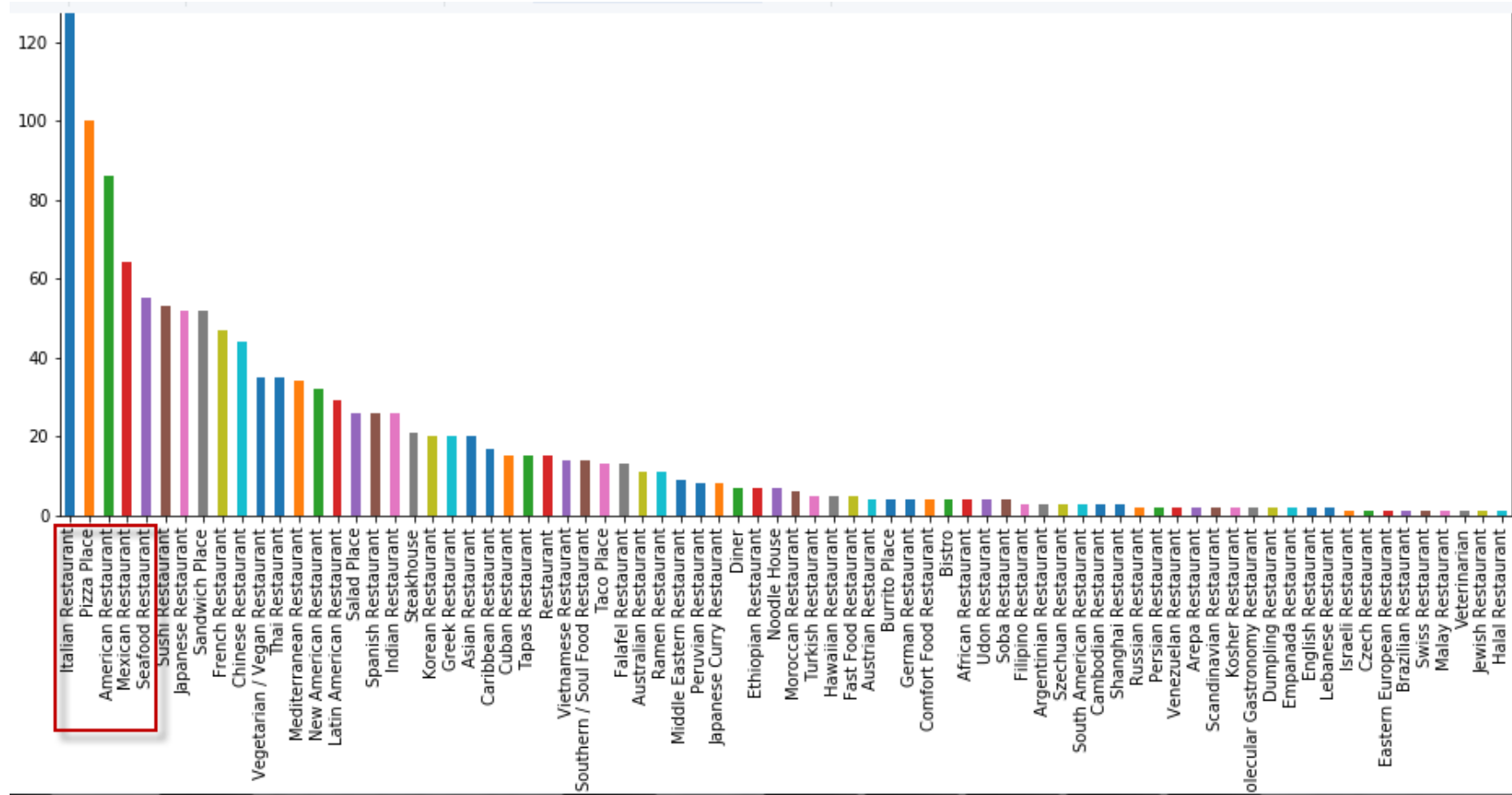
Neighbourhood population in each neighbourhood in Manhattan



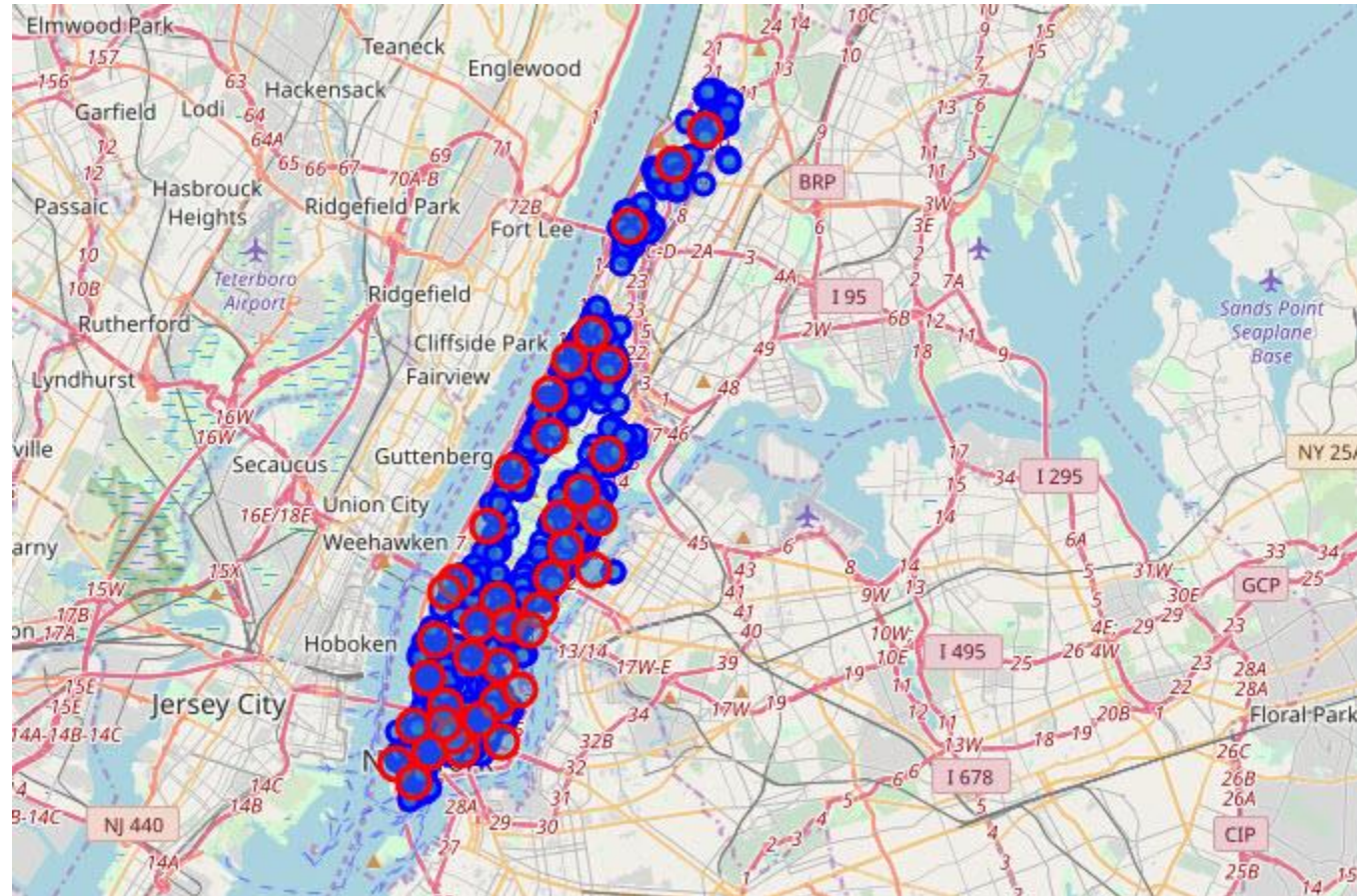
Restaurant numbers by each neighbourhood in Manhattan



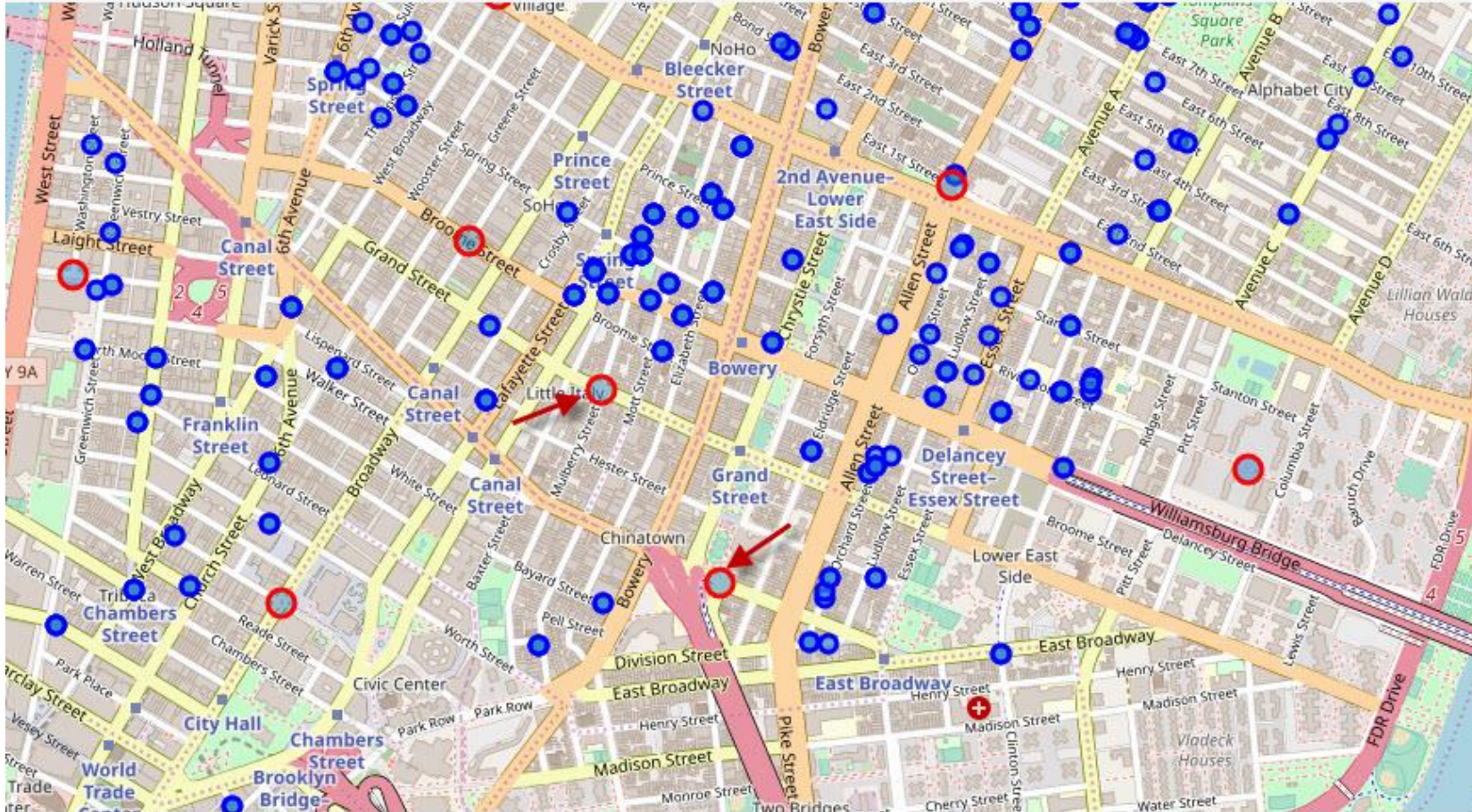
Restaurant number by category in Manhattan



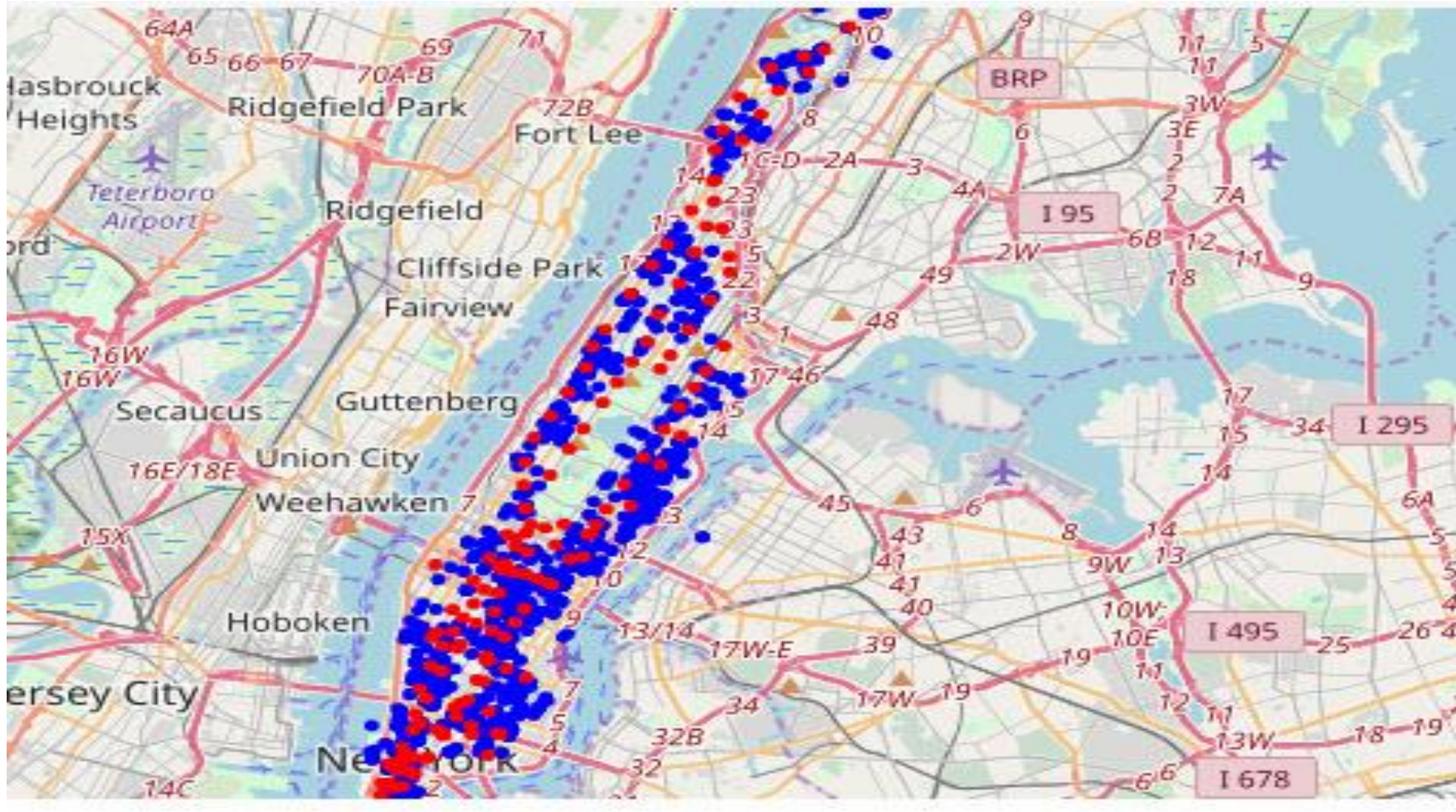
Restaurant locations (blue ones) and neighbourhood locations (red ones) in Manhattan



Restaurant location in Little Italy and Chinatown in Manhattan



Subway locations (red ones) and Restaurant locations (blue ones) in Manhattan



Subway locations and Restaurant location in Manhattan South



Subway locations and Restaurant location in Manhattan North

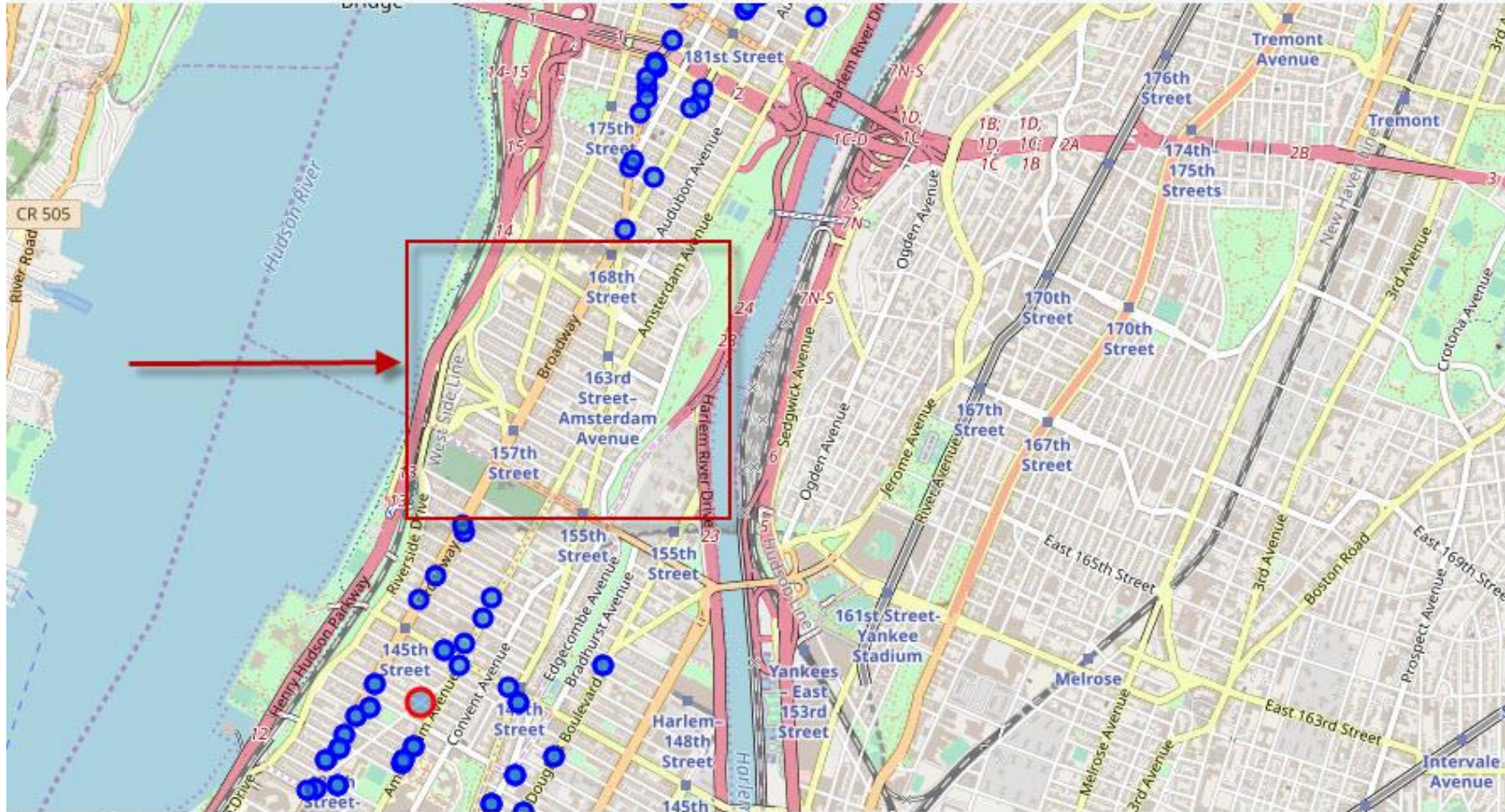


Where to open the new restaurant?

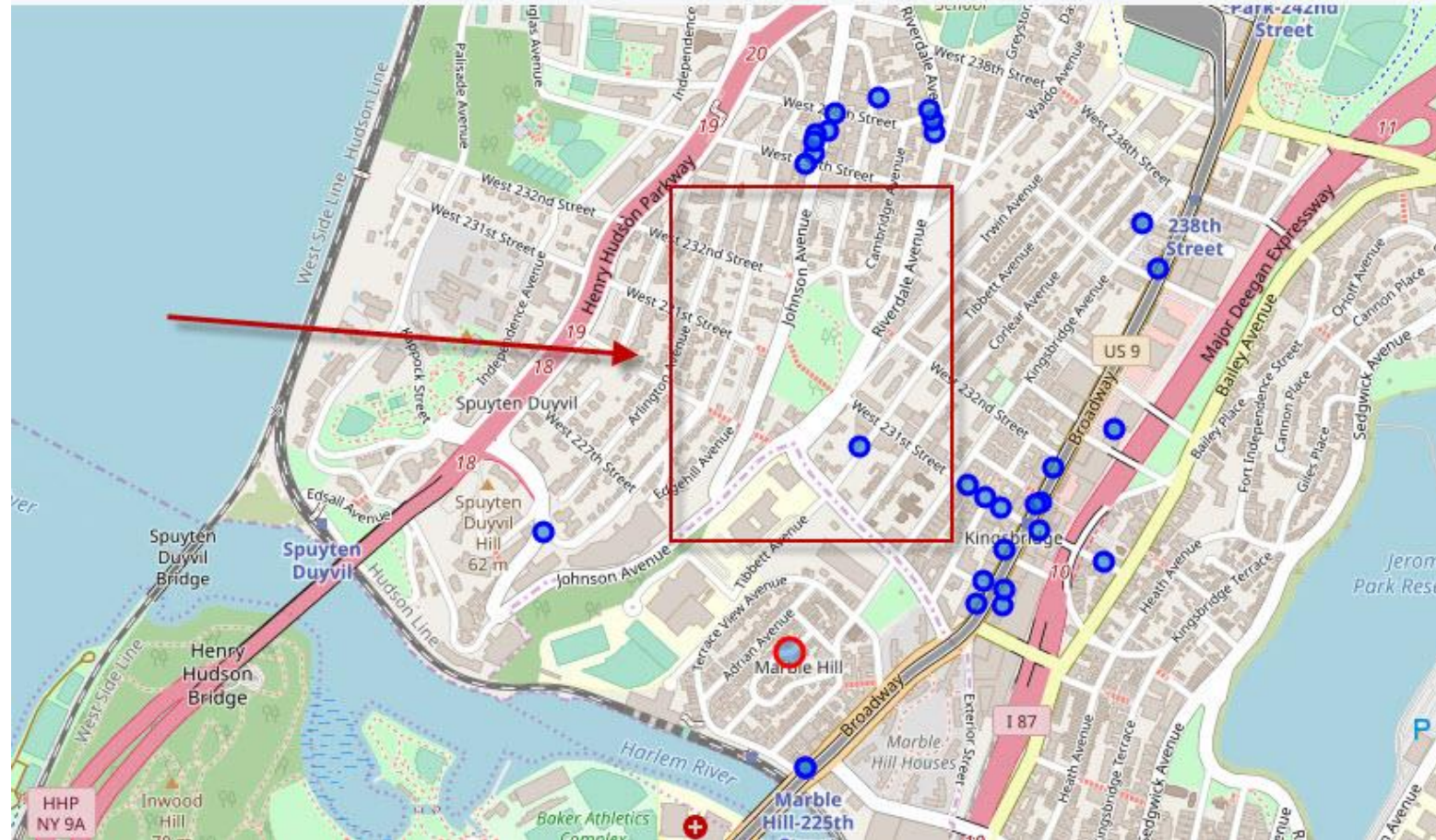
location patterns:

- Restaurants are clustered close to each other
- Restaurants are clustered around most of Subway Stations
- Restaurants in Manhattan south are denser than in the north (so competition is high)

Potential area in between Inwood and Washington Heights



Potential area in Marble Hill Area



Future Direction

- Permit Information: This data will give us where are commercial zones, specifically, if the restaurant is allowed in any location.
- Hotel Information: This data will show us where are most visitors stay
- Restaurant Detail information: This data is about restaurant opening hours, ratings and others.

Thank a lot for reading this!