Choosing the right location to move in during work travel

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1. Introduction

1.1 Background

During my work i have encounter a lot of people that came to work from different countries and one problem that is common during our conversations is how to find a suitable place to live each time a new job in different country arise

1.2 Problem

Let's solve a modern problem, the work as consultant (of any area) is becoming more common so there is a necessity to find suitable places to live during travels to different countries
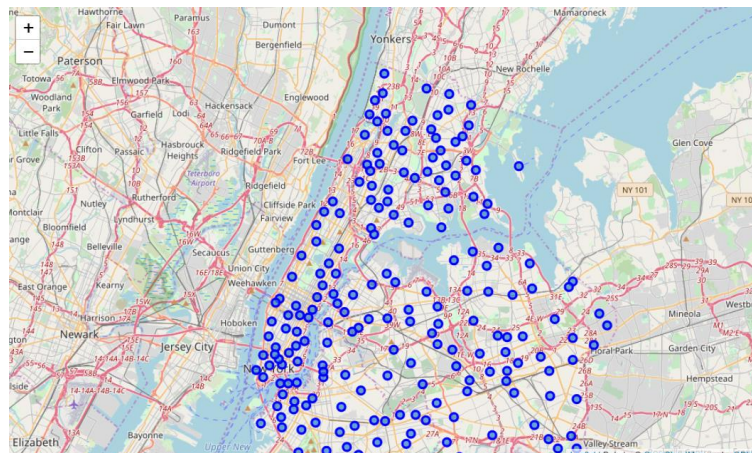
1.3 Interest

People who want to travel to different countries and facilitate the search of areas where they might want to live during the work trip

2. Data acquisition and cleaning

2.1 Data Sources

The data will be used as follows:
- Use Foursquare and geopy data to map top 10 venues for all Manhattan neighborhoods and clustered in groups
- Use foursquare and geopy data to map the location of subway metro stations, separately and on top of the above clustered map in order to be able to identify the venues and amenities near each metro station, or explore each subway location separately

3. Methodology

First, we specify the Area of interest, in this case we use Manhattan, after that we found the Borough and Neighborhood
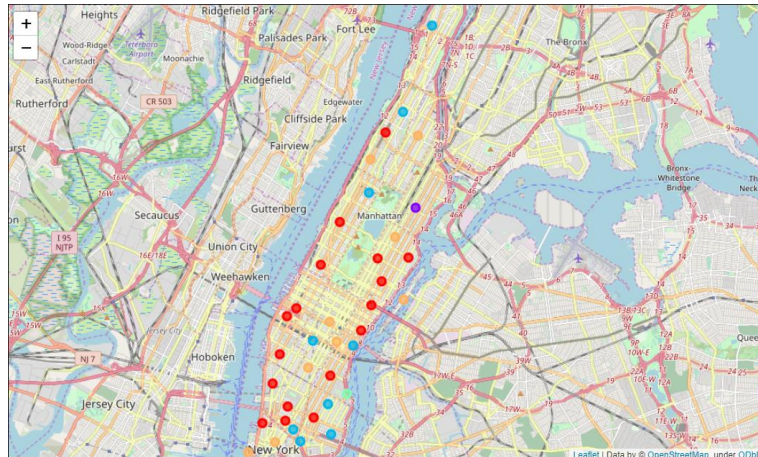
After that we query the venues at a ratio of 500m around each neighborhood and filter the data according to the customer requirements which in this case are:

- Desired location is near a metro station
- Desirable to have venues such as coffee shops, restaurants, wine stores, gym and food shops

After the queries and filtering we apply K-means to create 5 clusters which share similarities in order to show to customer the matching areas and then he can select the most suitable

4. Results

The final Results show the clusters which share the most common venues as required

5. Conclusion

By using the methods described above we can select most suitable places according to the requirements of customers and we can even input locations of the companies in which people will work to select the venues near these locations and make this model more complex