BEST PLACE TO OPEN A NEW CAFÉ IN MANHATTAN NEIGHBORHOOD

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Important parameters to choose a place

◦ **1-1-Demographics**

◦ Foot traffic is important when you're picking a location for your coffee shop. But a ton of foot traffic doesn't matter if those people aren't your target demographic.

◦ **1-2-Neighboring businesses**

◦ When you're determining the best location for a coffee shop, neighboring businesses can also affect your profitability — both negatively and positively.

◦ **1-3-Accessibility**

◦ The accessibility of the space should be another consideration when you're searching for the best location for your coffee shop. While your customers will come back for the quality of your product , the convenience of your coffee shop's location will also weigh into their decision to first give you a try (and then come back).

Selected Data from available information

◦ As there are so many important parameters that we have to consider, it was decided that we focus on limited number of parameters which seem to be more important in comparison with other ones. These parameters are listed below:

◦ **1- Total number of Cafe/Cafeteria/Coffee in each neighborhood**
2- Average rating for these stores for each neighborhood
3- Foot traffic in the area

◦ **1-1- Total number of Cafe/Cafeteria/Coffee in each neighborhood:**

◦ Total number of stores will somehow shows number of opponents we have in the area. People are free to choose their favorit cafe; however, having too many stores in the area means that we have to share our customer which may decrease profitability.

# Selected Data from available information (Cont.)

◦ **1-2- Average rating for these stores for each neighborhood**

◦ Average rating of open stores could be a good measurement for the quality of exisiting Cafe. We can focuse on areas with lower average rating.

◦ **1-3- Foot trafic in the area**

◦ Foot trafic is a good measure for determining if an area is a populated area or not. We can expect seeing higher foot traffic close the malls, universities or business areas. If the data regarding foot traffic is not available, we can find places like "university" and show the area around it as high foot trafic area. For this purpose, all important places, like offices, financial institutes, universities, etc are considered for each neighborhood.
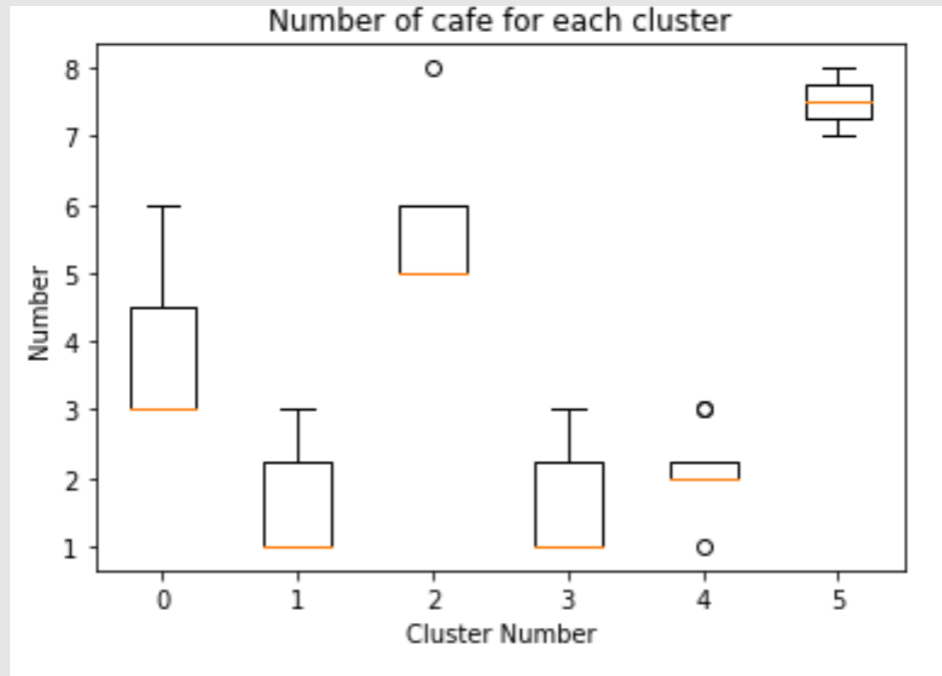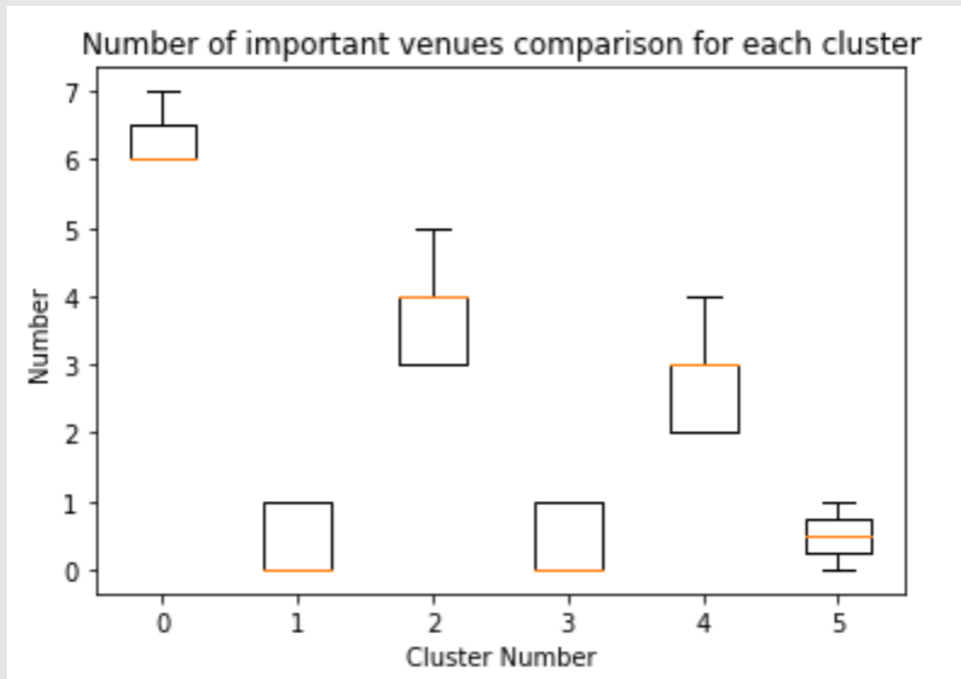
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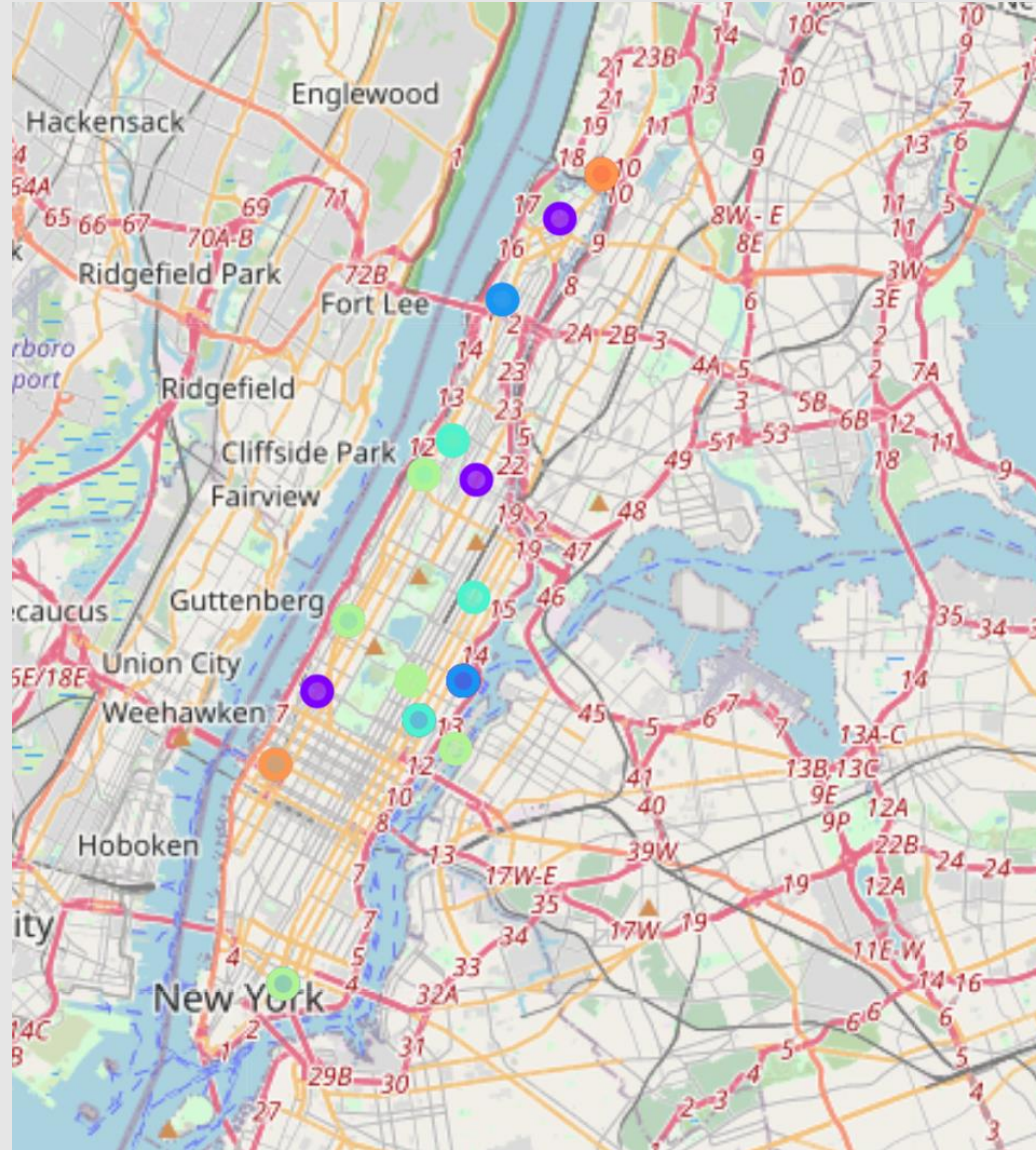
Results (Cont.)

◦ In order to have better understanding of generated clusters we can compare clusters from "average rating", "number of important venues", and "number of Cafe" point of view:

Results (Cont.)

Number of important venues comparison for each cluster

Number of cafe for each cluster
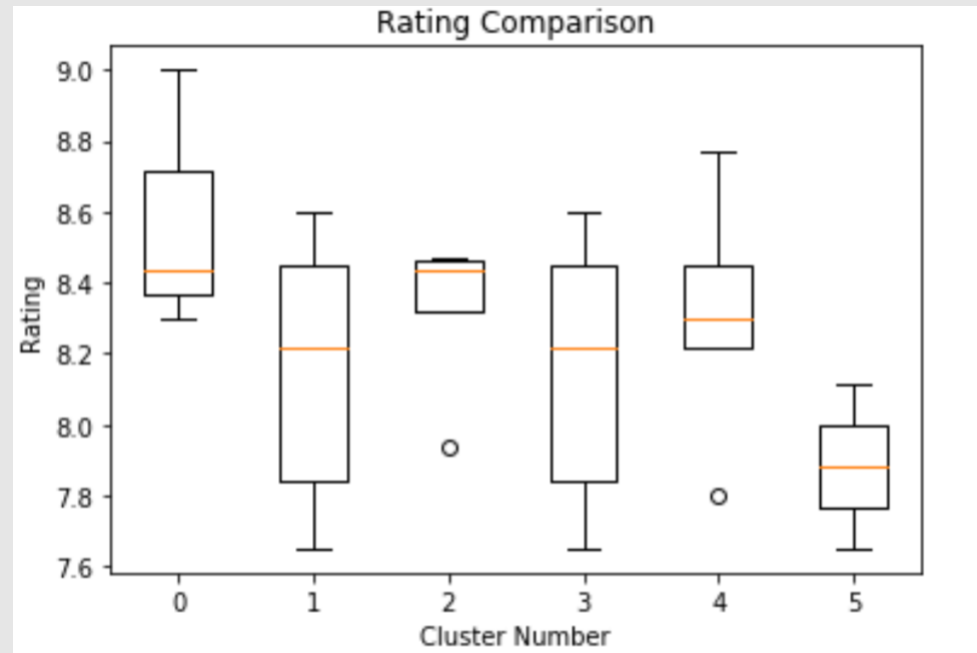
Results (Cont.)

◦ As shown above, it's obvious that the ideal case would be a case that we have low number of Cafe in the area, high number of important avenues in the area and low rating in the are. By looking at box plot comparison, it's clear that cluster 0 is closer to what we are looking for for this purpose. Now, let's have a closer look to cluster 0 for more detail:

Neighborhood	rating	Number of Total imp. Vanues	Totla Number Store
Battery Park City	9.000000	6	3
Midtown	8.433333	6	6
Midtown South	8.300000	7	3

Conclusion

◦ Considering the result of analysis, we recommend opening a Cafe in **"Midtown South"** area as this area has fewer cafe. Also the rating for the current available cafe in the area is lower comparing to other areas and number of important venus are more than other ones