Finding a Good Location for a Café in Malmö

Clustering Neighborhoods in Malmö, Sweden

Malmö is one of the major cities in Sweden, and coffee or Fika as we call it in Swedish, is a popular part of the local culture.

Being just 20 minutes across the bridge from the Danish Capital city of Copenhagen, there are a lot of tourists visiting the city all year round.

Objective

• Since the visiting population is growing and there is potential to open a new coffee shop, there is **a need to find the right location for the coffee shop.**

• How can we find the right set of neighborhoods to start a new café in Malmö?

Need

- There needs to be a location that should already not have a larger density of Coffee shops

- Based on the neighborhood selected, further analysis of growth potential and tailored customer experiences can be structured

- It is also important to have clusters of neighborhoods to differentiate and compare clusters.

- A visual representation of the neighborhoods selected would further help in driving insights to location selection

Data

- The data used will be available from Wikipedia, to find the list of neighborhoods in Malmö City. The dataset consists of the neighborhoods, and using geocoding, we can obtain the locations of them. Foursquare API will be then used to analyze the places in these neighborhoods and see different available venues in these neighborhoods.

- Localities information / Source:
https://en.wikipedia.org/wiki/Category:Neighbourhoods_of_Malm%C3%B6
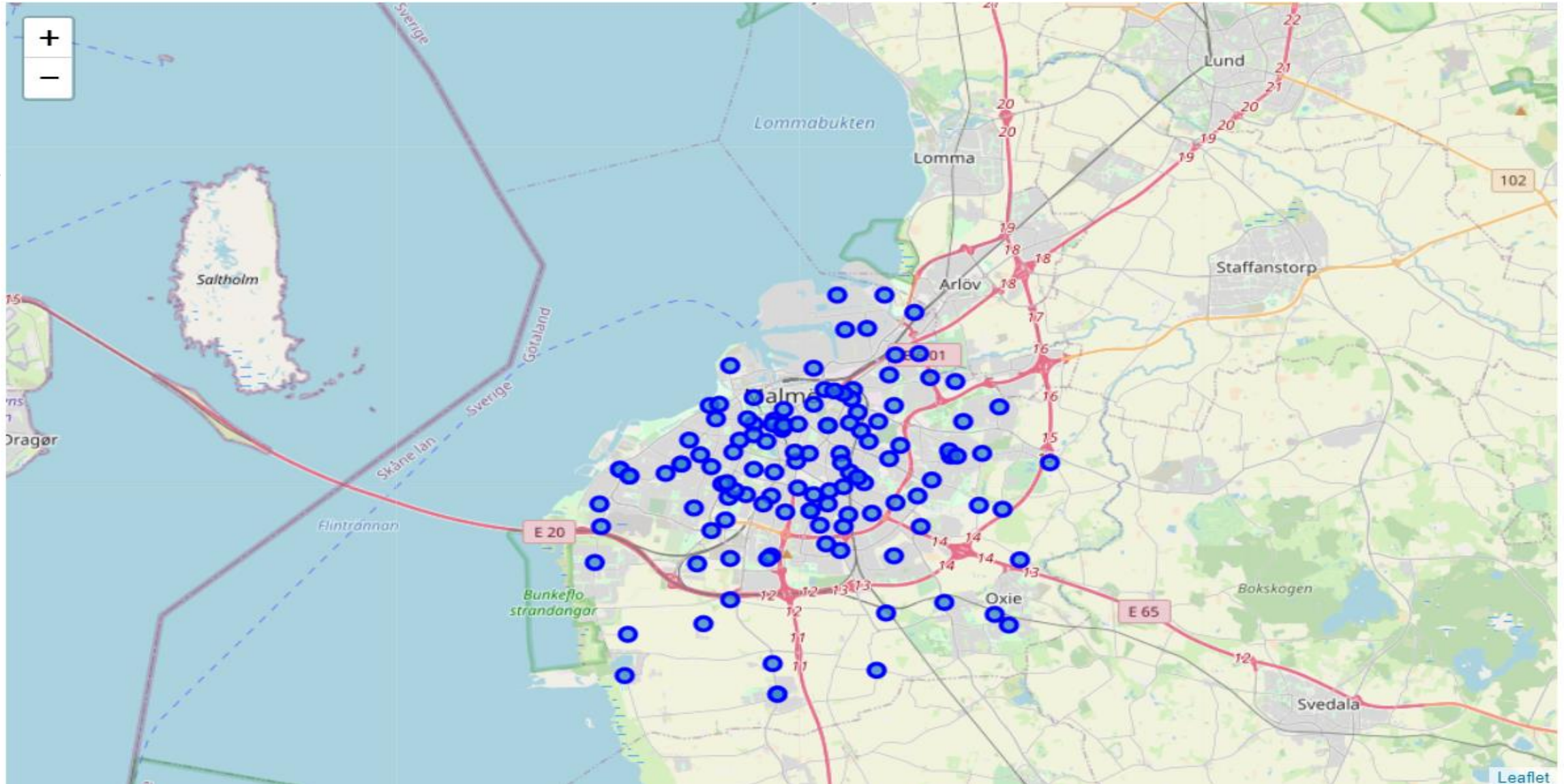
- Location Provider used: Foursquare API

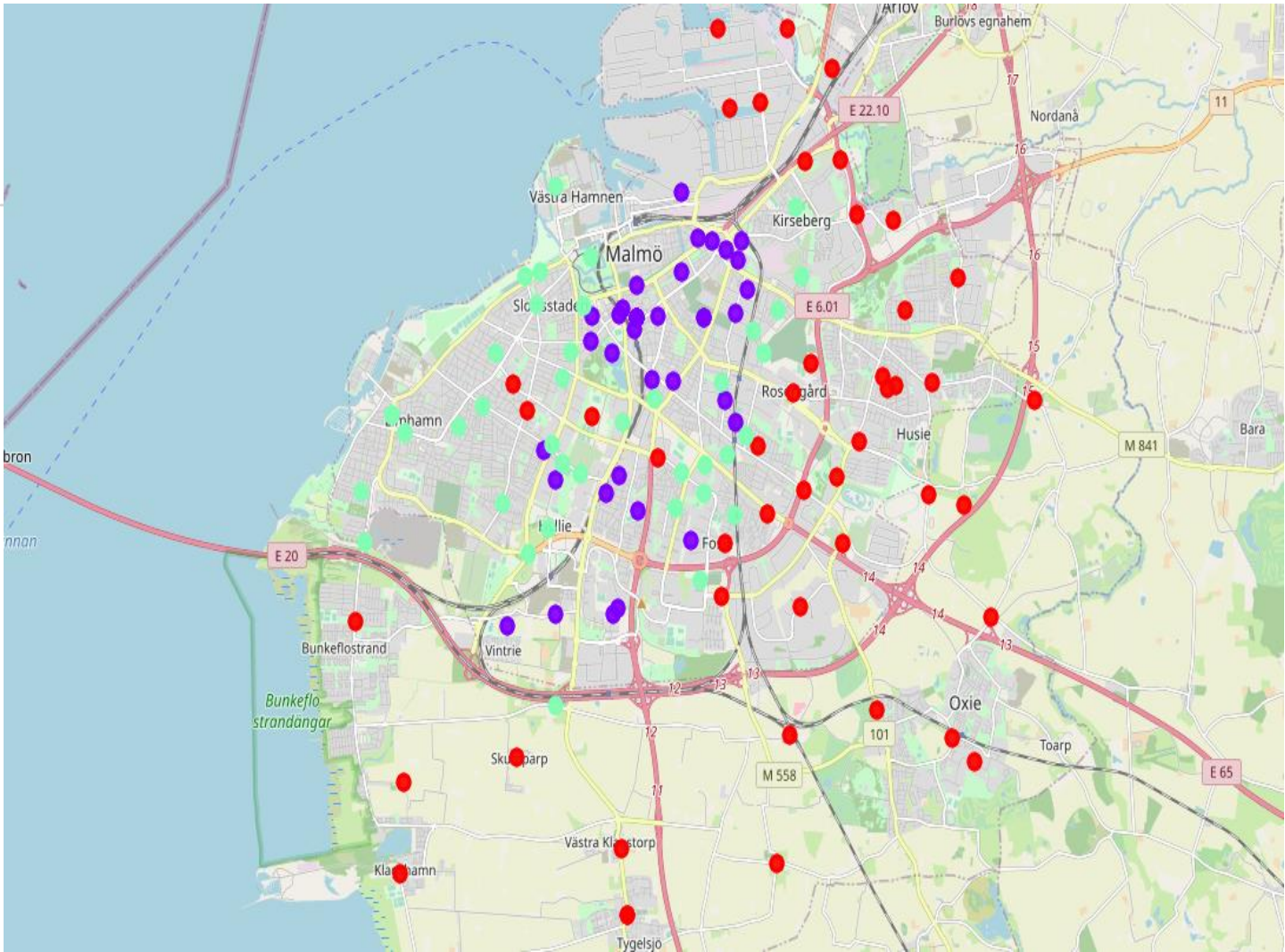"https://api.foursquare.com/v2/venues/explore?client_id={}

Methodology

- Obtaining all the different neighbourhoods in Malmö.

- Then, we need to get their location (Latitude and longitude), through geocoding.

- We can use Folium to visualize the Map of the different neighbourhoods in Malmö city.

- Deep dive into the different venues available in Foursquare for these neighbourhoods.

- This can be done by utilizing the explore section of the foursquare api and then for each neighborhood we get the common places that are the top 100.

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- We then map these locations of these places to the neigbourhoods we already captured, in our dataframe.
- Sample 5 Rows from our Dataframe at this stage (We have mapped all venues to all neighbourhoods)

- Run K-Means Clustering to Cluster the Dataframe

Neighbourhoods

Mapping Neighborhoods

Sample 5 Rows from our Dataframe at this stage (We have mapped all venues to all neighbourhoods)

Neighborhood	Latitude	Longitude	Venu eName	Venue Latitude	Venue Longitude	Venue Category
Almgården, Malmö	55.575907	13.059481	Jump	55.567172	13.062028	Theme Park
Almgården, Malmö	55.575907	13.059481	Falafel N.1	55.583700	13.034183	Falafel Restaurant
Almgården, Malmö	55.575907	13.059481	Jägers Zoo	55.565007	13.067428	Pet Store

	Neighborhoods	Antique Shop	Argentinian Restaurant	Art Gallery	Art Museum	Arts & Crafts Store	Asian Restaurant	Chinese Restaurant	Clothing Store	Cocktail Bar	Coffee Shop
0	Almgården, Malmö	0	0	0	0	0	0	0	0	0	0
1	Almgården, Malmö	0	0	0	0	0	0	0	0	0	0
2	Almgården, Malmö	0	0	0	0	0	0	0	0	0	0

Clustering using k-Means

CLUSTER LABELS	COLOR	DESCRIPTION
0	RED	Low Density
2	GREEN	Medium Density
1	PURPLE	High Density

Results & Discusssion

- Our First Cluster consists of neighborhoods that do not have a café , or the frequency/density of coffee shops is low. By Visualizing these neighborhoods on a map, the ones located towards popular city neighborhoods are top contenders for choosing a location for our new Café. These are marked RED in the Map above.

- Our second cluster, or the Purple ones in the map, consist of High density of coffee shops/Cafes in the neighborhood. By logical thought, these would be popular tourist and city hotspots. However, this cluster is used as a comparison to the other cluster to identify potential places in the vicinity of these hot neighborhoods that then can be a potential candidate for our café. This means, we can further analyses data by using these as a control group.

- In our third cluster, these are clusters which have a medium density of cafes . The strategy used here is more penetration to the market. Here we need to also adapt to the offerings available and potential needs and customer requirements. These clusters are also potential neighborhoods that can be considered.

Conclusion

Based on the clusters obtained, we can conclude that the RED Clusters are the key areas where we should consider opening the café. Within these we can find location which are in closer proximity to city hotspots, but still have a lower density of coffee shops and avoid increased competition. The Green Spots that are chosen would also be strong contenders, as some of them can be seen in key locations. These are also potential locations for consideration. If these locations are chosen, the onus would be more on the offering that the coffee business is offering, so as to differentiate from the competition.