# **Capstone Project:**

# Finding a Good Location for a Café in Malmö

Clustering Neighborhoods in Malmö, Sweden



### **Introduction/Business Problem**

Opening a New Cafe in the City of 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. From Artisan coffee shops to age old traditional coffee shops, cafe's are already popular, and their popularity is growing in the city. 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.

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?

The idea of this analysis is to understand where are the different coffee shops across Malmö today, and cluster the neighborhoods based on coffee shops and look and compare the data to find the best cluster of neighborhoods to open a new coffee shop.

- 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 Section**

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

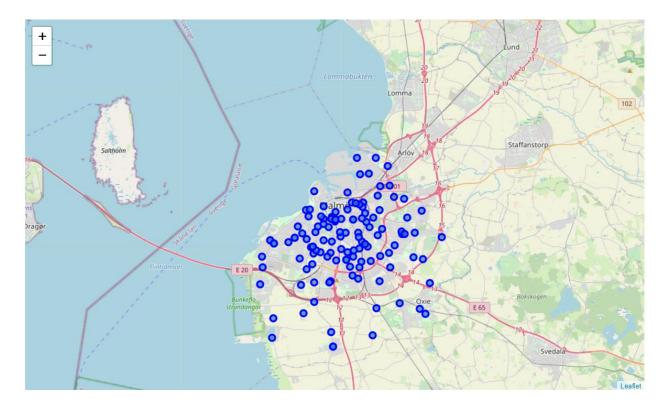
**Location Provider used:** Foursquare API

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

# **Methodology Section**

The following steps were performed to Analyze and obtain the objective:

We Start our Analysis by first 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.



In the next step, we 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.

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)

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

3	Almgården, Malmö	55.575907	13.059481	Systembolaget	55.569909	13.058000	Liquor Store
4	Almgården, Malmö	55.575907	13.059481	City Gross Malmö	55.586408	13.046537	Supermarke

The Foursquare API returned 186 Unique categories at the point of query.

The Venue types were then mapped to the different neighborhoods.

Here is a sample of our dataframe at this stage:

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
1	Almgården, Malmö	0	0	0	0	0	0	0	0	0
2	Almgården, Malmö	0	0	0	0	0	0	0	0	0

We then further analyse the mean of frequency of each occurrence, to know the density of different venues in the city

Having the data we need, thus We now focus on our objective, on understanding the dispersion of coffee shops in Malmo.

Sample Data frame showing the density of coffee shops across neighborhoods:

	neighborhood	Coffee Shop Density
0	Almgården, Malmö	0.000000
1	Almhög	0.032609
2	Almvik, Malmö	0.052632
3	Annelund, Malmö	0.043478
4	Annetorp	0.043478

Having the data mapped for café/Coffee places, we now need to Cluster these results to select an appropriate location.

This can be done by using the k-means algorithms from the scikit learn library. Our objective is to cluster these neighborhoods for coffee places based on the density/frequency of occurrence.

On Successful completion of the K-means algorithm, we now have a clustered neighbourhood as per our objective.

	neighborhood	Coffee Shop Density	Cluster Labels
0	Almgården, Malmö	0.000000	0
1	Almhög	0.032609	2
2	Almvik, Malmö	0.052632	1
3	Annelund, Malmö	0.043478	2
4	Annetorp	0.043478	2

We then leverage folium to visualize these clusters on the map.

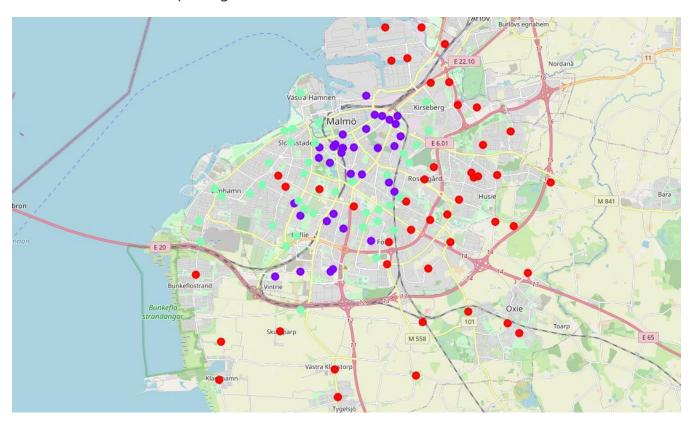
### **Result Section**

The neighborhoods were successfully clustered as per our objective.

Cluster labels were successfully derived based on the density and location for all the provided neighborhoods in the city. Since we had limited to three clusters, we can find all the data under cluster labels: 0 (RED), 1 (PURPLE) and 2 (GREEN)

	neighborhood	Coffee Shop Density	Cluster Labels
0	Almgården, Malmö	0.000000	0
1	Almhög	0.032609	2
2	Almvik, Malmö	0.052632	1
3	Annelund, Malmö	0.043478	2
4	Annetorp	0.043478	2

#### Visualization on the Map using Folium:



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

To summarize, the results will be visualized and clusters will be analyzed comprising of the neighborhoods of different cafés in Malmö, by applying unsupervised learning algorithm i.e. K-means clustering. The results obtained after applying the K-means algorithm on both the dataset The common places for both the cities had coffee shops, cafe's and restaurants for certain clusters and others for different clusters. These clusters form a base for further analysis.

#### **Discussion Section**

These Clusters provided a key overview on the initial set of locations considered for opening a café. The next steps then can be to identify more popular hotspots within these neighbourhoods. The parameters for this will then depend on the kind of café being considered. For example, a take away kiosk and an artisan coffee shop have a lot of different parameters to consider. But, the overall analysis done here would surely point out the first step in finding a location using data driven decision making.

#### **Cluster Analysis in Depth:**

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 Section**

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.

The last cluster, Purple can be labelled as hotspots with high density. These are locations with high footfall, and hence higher completion. If the objective is solely to differentiate based on product offerings, then these locations can be considered as a major contender.

CLUSTER LABELS	•		Contenders
0	RED	Low Competition, Lower Activity	Location as an Advantage
2	GREEN	Medium Competition, Medium Footfalls	Product /Pricing as a Differentiator
1 PURPLE		High Competition, Higher Footfalls	Product /Price and Experience and Presence of Additional Competitive differentiators

#### Below are the results of neighborhoods of each cluster:

CLUSTER 0: RED

	Neighborhood	Coffee Shop	Cluster Labels	Latitude	Longitude
0	Almgården, Malmö	0.000000	0	55.575907	13.059481
118	Valdemarsro	0.000000	0	55.609526	13.075642
118	Valdemarsro	0.000000	0	55.609526	13.075642
44	Inre hamnen	0.000000	0	55.610414	13.065058
44	Inre hamnen	0.000000	0	55.610414	13.065058
43	Höja, Malmö	0.000000	0	55.580504	13.065725
119	Videdal	0.000000	0	55.589113	13.072856
119	Videdal	0.000000	0	55.589113	13.072856
110	Södra Sofielund	0.000000	0	56.892240	13.781430
110	Södra Sofielund	0.000000	0	56.892240	13.781430
74	Möllevången	0.000000	0	55.535543	12.932825
74	Möllevången	0.000000	0	55.535543	12.932825
109	Södra Sallerup	0.000000	0	55.585840	13.117070
109	Södra Sallerup	0.000000	0	55.585840	13.117070
115	Tygelsjö vång	0.000000	0	55.518160	12.998370

115	Tygelsjö vång	0.000000	0	55.518160	12.998370
37	Hindby	0.000000	0	55.571066	13.039076
37	Hindby	0.000000	0	55.571066	13.039076
36	Herrgården	0.000000	0	59.195040	12.105110
36	Herrgården	0.000000	0	59.195040	12.105110
78	Norra hamnen, Malmö	0.000000	0	55.624380	13.028020
78	Norra hamnen, Malmö	0.000000	0	55.624380	13.028020
61	Käglinge	0.000000	0	55.567123	13.060948
61	Käglinge	0.000000	0	55.567123	13.060948
46	Jägersro	0.000000	0	55.574062	13.049742
46	Jägersro	0.000000	0	55.574062	13.049742
76	Norra Sofielund	0.000000	0	56.892240	13.781430
76	Norra Sofielund	0.000000	0	56.892240	13.781430
135	Östra hamnen	0.000000	0	55.625080	13.037150
135	Östra hamnen	0.000000	0	55.625080	13.037150
72	Mellanheden	0.000000	0	55.587990	12.964865
72	Mellanheden	0.000000	0	55.587990	12.964865
51	Klagshamn	0.000000	0	55.523490	12.931810
51	Klagshamn	0.000000	0	55.523490	12.931810
52	Kristineberg, Malmö	0.000000	0	55.545120	13.071030
52	Kristineberg, Malmö	0.000000	0	55.545120	13.071030
70	Lönngården	0.000000	0	57.766670	11.816670
70	Lönngården	0.000000	0	57.766670	11.816670
59	Kungshög, Malmö	0.000000	0	55.557283	13.104230
30	Glostorp	0.000000	0	55.524970	13.041660
59	Kungshög, Malmö	0.000000	0	55.557283	13.104230
116	Törnrosen	0.000000	0	55.579965	13.036280
57	Kryddgården	0.000000	0	55.590690	13.051910
57	Kryddgården	0.000000	0	55.590690	13.051910
67	Lockarp	0.000000	0	55.541830	13.045680
67	Lockarp	0.000000	0	55.541830	13.045680

60	Kvarnby	0.000000	0	55.572200	13.096415
60	Kvarnby	0.000000	0	55.572200	13.096415
47	Jägersro villastad	0.000000	0	55.829090	13.392700
47	Jägersro villastad	0.000000	0	55.829090	13.392700
48	Kastanjegården	0.000000	0	55.560050	13.025740
48	Kastanjegården	0.000000	0	55.560050	13.025740
116	Törnrosen	0.000000	0	55.579965	13.036280
30	Glostorp	0.000000	0	55.524970	13.041660
43	Höja, Malmö	0.000000	0	55.580504	13.065725
114	Tygelsjö	0.000000	0	55.518160	12.998370
33	Gullviksborg	0.000000	0	55.567150	13.026710
105	Stenkällan	0.000000	0	55.587510	13.073947
105	Stenkällan	0.000000	0	55.587510	13.073947
88	Riseberga, Malmö	0.000000	0	55.597838	13.079096
88	Riseberga, Malmö	0.000000	0	55.597838	13.079096
16	Elisedal	0.000000	0	55.573401	13.086057
16	Elisedal	0.000000	0	55.573401	13.086057
89	Rosengård Centrum	0.000000	0	55.586940	13.046690
89	Rosengård Centrum	0.000000	0	55.586940	13.046690
104	Stadionområdet, Malmö	0.010000	0	55.583730	12.987770
104	Stadionområdet, Malmö	0.010000	0	55.583730	12.987770
33	Gullviksborg	0.000000	0	55.567150	13.026710
95	Sege industriområde	0.000000	0	55.629640	13.058050
103	Spillepengen	0.000000	0	55.634704	13.044758
103	Spillepengen	0.000000	0	55.634704	13.044758
11	Bunkeflostrand	0.000000	0	55.556760	12.918770
11	Bunkeflostrand	0.000000	0	55.556760	12.918770
114	Tygelsjö	0.000000	0	55.518160	12.998370
14	Djupadal	0.000000	0	57.695120	13.043290
121	Virentofta	0.000000	0	55.587795	13.076510
121	Virentofta	0.000000	0	55.587795	13.076510

113	Toftanäs	0.000000	0	55.602085	13.094702
113	Toftanäs	0.000000	0	55.602085	13.094702
0	Almgården, Malmö	0.000000	0	55.575907	13.059481
95	Sege industriområde	0.000000	0	55.629640	13.058050
19	Eriksfält	0.012987	0	55.578419	13.007218
14	Djupadal	0.000000	0	57.695120	13.043290
21	Fortuna Hemgården	0.000000	0	55.950000	12.750000
19	Eriksfält	0.012987	0	55.578419	13.007218
125	Västra Klagstorp	0.000000	0	55.526900	12.996450
125	Västra Klagstorp	0.000000	0	55.526900	12.996450
8	Bellevuegården	0.015152	0	55.584590	12.969060
99	Skumparp	0.000000	0	55.538850	12.965770
99	Skumparp	0.000000	0	55.538850	12.965770
81	Oljehamnen, Malmö	0.000000	0	55.634706	13.024525
81	Oljehamnen, Malmö	0.000000	0	55.634706	13.024525
82	Oxie kyrkby	0.000000	0	55.541440	13.092960
82	Oxie kyrkby	0.000000	0	55.541440	13.092960
97	Segevång	0.000000	0	55.617324	13.049957
97	Segevång	0.000000	0	55.617324	13.049957
8	Bellevuegården	0.015152	0	55.584590	12.969060
83	Oxievång	0.000000	0	55.538389	13.099333
83	Oxievång	0.000000	0	55.538389	13.099333
5	Apelgården	0.000000	0	58.077780	11.666670
23	Fosieby industriområde	0.000000	0	55.558700	13.048770
23	Fosieby industriområde	0.000000	0	55.558700	13.048770
5	Apelgården	0.000000	0	58.077780	11.666670
132	Östra Skrävlinge	0.000000	0	55.588260	13.087137
132	Östra Skrävlinge	0.000000	0	55.588260	13.087137
96	Segemölla	0.000000	0	55.617494	13.060178
96	Segemölla	0.000000	0	55.617494	13.060178
21	Fortuna Hemgården	0.000000	0	55.950000	12.750000

### CLUSTER 1 (PURPLE)

84	Persborg	0.050000	1	55.583020	13.029846
111	Teatern, Malmö	0.060000	1	55.596690	13.001100
85	Pildammsparken	0.060000	1	55.592040	12.993670
85	Pildammsparken	0.060000	1	55.592040	12.993670
106	Svågertorp	0.050000	1	55.557755	12.994078
106	Svågertorp	0.050000	1	55.557755	12.994078
111	Teatern, Malmö	0.060000	1	55.596690	13.001100
84	Persborg	0.050000	1	55.583020	13.029846
108	Södervärn	0.050000	1	55.588456	13.011655
92	Rådmansvången	0.060000	1	55.595272	13.000384
69	Lugnet, Malmö	0.060000	1	55.596690	13.001100
69	Lugnet, Malmö	0.060000	1	55.596690	13.001100
108	Södervärn	0.050000	1	55.588456	13.011655
17	Ellstorp	0.050000	1	55.604359	13.030461
17	Ellstorp	0.050000	1	55.604359	13.030461
77	Norra Sorgenfri	0.060000	1	55.597330	13.029730
13	Davidshall	0.070000	1	55.601077	13.000866
92	Rådmansvången	0.060000	1	55.595272	13.000384
77	Norra Sorgenfri	0.060000	1	55.597330	13.029730
133	Östra Sorgenfri	0.070000	1	55.596702	13.020496
94	Rörsjöstaden	0.070000	1	55.602790	13.013910
13	Davidshall	0.070000	1	55.601077	13.000866
10	Bulltofta	0.045455	1	55.606886	13.031442
10	Bulltofta	0.045455	1	55.606886	13.031442
130	Örtagården, Malmö	0.060000	1	55.596690	13.001100
130	Örtagården, Malmö	0.060000	1	55.596690	13.001100
131	Östervärn	0.070000	1	55.605739	13.027062
131	Östervärn	0.070000	1	55.605739	13.027062

133	Östra Sorgenfri	0.070000	1	55.596702	13.020496
94	Rörsjöstaden	0.070000	1	55.602790	13.013910
107	Södertorp	0.045455	1	55.573761	12.992036
58	Kulladal	0.049383	1	55.571299	13.001336
58	Kulladal	0.049383	1	55.571299	13.001336
50	Kirsebergsstaden	0.060000	1	55.596690	13.001100
50	Kirsebergsstaden	0.060000	1	55.596690	13.001100
112	Toarp, Malmö	0.060000	1	55.596904	13.007058
112	Toarp, Malmö	0.060000	1	55.596904	13.007058
93	Rönneholm, Malmö	0.060000	1	55.597115	12.995921
93	Rönneholm, Malmö	0.060000	1	55.597115	12.995921
107	Södertorp	0.045455	1	55.573761	12.992036
2	Almvik, Malmö	0.052632	1	55.557764	12.977358
100	Slussen, Malmö	0.060000	1	55.596690	13.001100
126	Västra Sorgenfri	0.070000	1	55.596702	13.020496
35	Hermodsdal	0.058824	1	55.567489	13.016880
31	Gröndal, Malmö	0.050000	1	55.575967	12.995702
31	Gröndal, Malmö	0.050000	1	55.575967	12.995702
122	Värnhem	0.070000	1	55.606840	13.023090
122	Värnhem	0.070000	1	55.606840	13.023090
101	Sofielunds industriområde	0.070000	1	55.585820	13.026660
27	Fågelbacken	0.050000	1	55.596910	12.988055
27	Fågelbacken	0.050000	1	55.596910	12.988055
26	Frihamnen	0.060000	1	55.613204	13.014162
26	Frihamnen	0.060000	1	55.613204	13.014162
65	Lindeborg	0.049180	1	55.558450	12.995519
65	Lindeborg	0.049180	1	55.558450	12.995519
120	Vintrie	0.050000	1	55.556120	12.963350
120	Vintrie	0.050000	1	55.556120	12.963350
24	Fredriksberg, Malmö	0.060000	1	55.607243	13.018938
24	Fredriksberg, Malmö	0.060000	1	55.607243	13.018938

2	Almvik, Malmö	0.052632	1	55.557764	12.977358
35	Hermodsdal	0.058824	1	55.567489	13.016880
55	Kronborg, Malmö	0.060000	1	55.593705	12.987705
101	Sofielunds industriområde	0.070000	1	55.585820	13.026660
39	Hyllieby	0.060000	1	55.596690	13.001100
126	Västra Sorgenfri	0.070000	1	55.596702	13.020496
55	Kronborg, Malmö	0.060000	1	55.593705	12.987705
38	Holma, Malmö	0.060000	1	55.597955	12.996690
22			1		
	Fosieby	0.060000		55.596690	13.001100
22	Fosieby	0.060000	1	55.596690	13.001100
117	Universitetssjukhuset MAS	0.060000	1	55.588640	13.005410
117	Universitetssjukhuset MAS	0.060000	1	55.588640	13.005410
53	Kroksbäck	0.045455	1	55.579345	12.973870
53	Kroksbäck	0.045455	1	55.579345	12.973870
38	Holma, Malmö	0.060000	1	55.597955	12.996690
39	Hyllieby	0.060000	1	55.596690	13.001100
49	Katrinelund	0.050000	1	55.600411	13.033242
49	Katrinelund	0.050000	1	55.600411	13.033242
41	Hästhagen, Malmö	0.060000	1	55.596690	13.001100
41	Hästhagen, Malmö	0.060000	1	55.596690	13.001100
40	Hyllievång	0.052632	1	55.575479	12.977226
40	Hyllievång	0.052632	1	55.575479	12.977226
100	Slussen, Malmö	0.060000	1	55.596690	13.001100

# CLUSTER 2: (GREEN)

	Neighborhood	Coffee Shop	Cluster Labels	Latitude	Longitude
20	Flensburg, Malmö	0.040000	2	55.586050	13.006257
124	Västra Kattarp	0.032967	2	55.581273	13.033005
124	Västra Kattarp	0.032967	2	55.581273	13.033005
129	Ärtholmen	0.032787	2	55.576298	12.984593

129         Ārtholmen         0.032787         2         55.576298         12.994593           127         Västra Söderkulla         0.041667         2         55.571778         13.012395           127         Västra Söderkulla         0.041667         2         55.571778         13.012395           123         Västra Västra Söderkulla         0.041667         2         55.58165         12.99706           102         Solbacken, Malmö         0.020000         2         55.588761         12.997245           128         Västra hamnen         0.030000         2         55.614050         12.977400           128         Västra hamnen         0.030000         2         55.614050         12.977400           128         Västra hamnen         0.030000         2         55.614050         12.977400           122         Solbacken, Malmö         0.020000         2         55.588761         12.977400           120         Solbacken, Malmö         0.020000         2         55.571778         13.012395           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620<						
127         Västra Söderkulla         0.041667         2         55.571778         13.012395           123         Västervång         0.016667         2         55.592165         12.959706           102         Solbacken, Malmö         0.020000         2         55.588761         12.979245           128         Västra hamnen         0.030000         2         55.614050         12.977400           128         Västra hamnen         0.030000         2         55.588761         12.977400           102         Solbacken, Malmö         0.020000         2         55.588761         12.977400           102         Solbacken, Malmö         0.020000         2         55.571778         13.012395           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.59461         12.997598           123         Västervång         0.016667         2         55.59461         12.971598           124         Rostorp         0.020000         2         55.61306         13.047135	129	Ärtholmen	0.032787	2	55.576298	12.984593
123         Västervång         0.016667         2         55.592165         12.99706           102         Solbacken, Malmö         0.020000         2         55.588761         12.979245           128         Västra hamnen         0.030000         2         55.614050         12.977400           128         Västra hamnen         0.030000         2         55.614050         12.977400           102         Solbacken, Malmö         0.020000         2         55.588761         12.977245           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.694670         12.997620           71         Malmöhus         0.040000         2         55.694670         12.997620           25         Fridhem, Malmö         0.020000         2         55.592661         12.9975620           25         Fridhem, Malmö         0.020000         2         55.592661         12.997506           25         Fridhem, Malmö         0.020000         2         55.592461         12.971598           12         Västervång         0.016667         2         55.592461         12.9971598	127	Västra Söderkulla	0.041667	2	55.571778	13.012395
102         Solbacken, Malmö         0.020000         2         55.588761         12.979245           128         Västra hamnen         0.030000         2         55.614050         12.977400           128         Västra hamnen         0.030000         2         55.614050         12.977400           102         Solbacken, Malmö         0.020000         2         55.588761         12.979245           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.598461         12.987620           71         Malmöhus         0.040000         2         55.598467         12.987620           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           123         Västervång         0.016667         2         55.598461         12.971598           124         Rostorp         0.020000         2         55.591681         13.047135           68         Lorensborg         0.028571         2         55.590079         12.976310           91 <td>127</td> <td>Västra Söderkulla</td> <td>0.041667</td> <td>2</td> <td>55.571778</td> <td>13.012395</td>	127	Västra Söderkulla	0.041667	2	55.571778	13.012395
128         Västra hamnen         0.030000         2         55.614050         12.977400           128         Västra hamnen         0.030000         2         55.614050         12.977400           102         Solbacken, Malmö         0.020000         2         55.588761         12.979245           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.598461         12.9977620           25         Fridhem, Malmö         0.020000         2         55.598461         12.997768           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.598061         13.047135           8         Lorensborg         0.028571         2         55.598069         13.047135           18	123	Västervång	0.016667	2	55.592165	12.959706
128         Västra hamnen         0.030000         2         55.614050         12.977400           102         Solbacken, Malmö         0.020000         2         55.588761         12.979245           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.604670         12.987620           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           123         Västervång         0.016667         2         55.598461         12.971598           12         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.59079         12.976310           91         Rostorp         0.020000         2         55.59103         13.047135           20	102	Solbacken, Malmö	0.020000	2	55.588761	12.979245
102         Solbacken, Malmö         0.020000         2         55.588761         12.979245           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.604670         12.987620           25         Fridhem, Malmö         0.020000         2         55.592465         12.987620           25         Fridhem, Malmö         0.020000         2         55.592165         12.987620           25         Fridhem, Malmö         0.020000         2         55.592165         12.99708           25         Fridhem, Malmö         0.020000         2         55.592165         12.971598           91         Rostorp         0.020000         2         55.59105         13.047135           68         Lorensborg         0.028571         2         55.586050         13.047135           20         Flensburg, Malmö         0.040000         2         55.595108         13.047135           <	128	Västra hamnen	0.030000	2	55.614050	12.977400
134         Östra Söderkulla         0.041667         2         55.571778         13.012395           134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.604670         12.987620           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           123         Västervång         0.016667         2         55.592165         12.959706           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.611305         13.047135           68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           10         Filensburg, Malmö         0.040000         2         55.596050         13.006257           18	128	Västra hamnen	0.030000	2	55.614050	12.977400
134         Östra Söderkulla         0.041667         2         55.571778         13.012395           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.604670         12.987620           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           123         Västervång         0.016667         2         55.592165         12.959706           25         Fridhem, Malmö         0.020000         2         55.592165         12.971598           91         Rostorp         0.020000         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           10         Rostorp         0.020000         2         55.611305         13.047135           12         Flensburg, Malmö         0.040000         2         55.596050         13.047135           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Eline	102	Solbacken, Malmö	0.020000	2	55.588761	12.979245
71         Malmöhus         0.040000         2         55.604670         12.987620           71         Malmöhus         0.040000         2         55.604670         12.987620           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           123         Västervång         0.016667         2         55.592165         12.959706           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.598079         12.976310           68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.598050         13.047135           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri </td <td>134</td> <td>Östra Söderkulla</td> <td>0.041667</td> <td>2</td> <td>55.571778</td> <td>13.012395</td>	134	Östra Söderkulla	0.041667	2	55.571778	13.012395
71         Malmöhus         0.040000         2         55.604670         12.987620           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           123         Västervång         0.016667         2         55.592165         12.959706           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.611305         13.047135           68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.586050         13.047135           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.592108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri <td>134</td> <td>Östra Söderkulla</td> <td>0.041667</td> <td>2</td> <td>55.571778</td> <td>13.012395</td>	134	Östra Söderkulla	0.041667	2	55.571778	13.012395
25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           123         Västervång         0.016667         2         55.592165         12.959706           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.611305         13.047135           68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.586050         13.006257           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri <td>71</td> <td>Malmöhus</td> <td>0.040000</td> <td>2</td> <td>55.604670</td> <td>12.987620</td>	71	Malmöhus	0.040000	2	55.604670	12.987620
123         Västervång         0.016667         2         55.592165         12.959706           25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.611305         13.047135           68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.586050         13.096257           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.592108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.582250         12.981755           12         Dammfri         0.040000         2         55.582970         12.976310           9         Borgmästaregården </td <td>71</td> <td>Malmöhus</td> <td>0.040000</td> <td>2</td> <td>55.604670</td> <td>12.987620</td>	71	Malmöhus	0.040000	2	55.604670	12.987620
25         Fridhem, Malmö         0.020000         2         55.598461         12.971598           91         Rostorp         0.020000         2         55.611305         13.047135           68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.586050         13.006257           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.58079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augusten	25	Fridhem, Malmö	0.020000	2	55.598461	12.971598
91         Rostorp         0.020000         2         55.611305         13.047135           68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.586050         13.006257           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.582970         12.976310           9         Borgmästaregården         0.030000         2         55.585190         12.956040           7         Bellevue, Malmö<	123	Västervång	0.016667	2	55.592165	12.959706
68         Lorensborg         0.028571         2         55.580079         12.976310           91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.586050         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         A	25	Fridhem, Malmö	0.020000	2	55.598461	12.971598
91         Rostorp         0.020000         2         55.611305         13.047135           20         Flensburg, Malmö         0.040000         2         55.586050         13.006257           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         A	91	Rostorp	0.020000	2	55.611305	13.047135
20         Flensburg, Malmö         0.040000         2         55.586050         13.006257           18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	68	Lorensborg	0.028571	2	55.580079	12.976310
18         Emilstorp         0.040000         2         55.595108         13.034866           18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.565775         12.969404           4         Annetorp         0.043478         2         55.565775         12.969404	91	Rostorp	0.020000	2	55.611305	13.047135
18         Emilstorp         0.040000         2         55.595108         13.034866           15         Elinelund         0.036364         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           7         Bellevue, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	20	Flensburg, Malmö	0.040000	2	55.586050	13.006257
15         Elinelund         0.036364         2         55.572423         12.961673           15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           7         Bellevue, Malmö         0.018182         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	18	Emilstorp	0.040000	2	55.595108	13.034866
15         Elinelund         0.036364         2         55.572423         12.961673           12         Dammfri         0.040000         2         55.592250         12.981755           12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	18	Emilstorp	0.040000	2	55.595108	13.034866
12     Dammfri     0.040000     2     55.592250     12.981755       12     Dammfri     0.040000     2     55.592250     12.981755       68     Lorensborg     0.028571     2     55.580079     12.976310       9     Borgmästaregården     0.030000     2     55.582970     12.996680       7     Bellevue, Malmö     0.018182     2     55.585190     12.956040       7     Bellevue, Malmö     0.018182     2     55.585190     12.956040       6     Augustenborg, Malmö     0.031915     2     55.578807     13.027216       6     Augustenborg, Malmö     0.031915     2     55.578807     13.027216       4     Annetorp     0.043478     2     55.565775     12.969404	15	Elinelund	0.036364	2	55.572423	12.961673
12         Dammfri         0.040000         2         55.592250         12.981755           68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	15	Elinelund	0.036364	2	55.572423	12.961673
68         Lorensborg         0.028571         2         55.580079         12.976310           9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	12	Dammfri	0.040000	2	55.592250	12.981755
9         Borgmästaregården         0.030000         2         55.582970         12.996680           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	12	Dammfri	0.040000	2	55.592250	12.981755
7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	68	Lorensborg	0.028571	2	55.580079	12.976310
7         Bellevue, Malmö         0.018182         2         55.585190         12.956040           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           6         Augustenborg, Malmö         0.031915         2         55.578807         13.027216           4         Annetorp         0.043478         2         55.565775         12.969404	9	Borgmästaregården	0.030000	2	55.582970	12.996680
6 Augustenborg, Malmö 0.031915 2 55.578807 13.027216 6 Augustenborg, Malmö 0.031915 2 55.578807 13.027216 4 Annetorp 0.043478 2 55.565775 12.969404	7	Bellevue, Malmö	0.018182	2	55.585190	12.956040
6 Augustenborg, Malmö 0.031915 2 55.578807 13.027216 4 Annetorp 0.043478 2 55.565775 12.969404	7	Bellevue, Malmö	0.018182	2	55.585190	12.956040
4 Annetorp 0.043478 2 55.565775 12.969404	6	Augustenborg, Malmö	0.031915	2	55.578807	13.027216
	6	Augustenborg, Malmö	0.031915	2	55.578807	13.027216
4 Annetorp 0.043478 2 55.565775 12.969404	4	Annetorp	0.043478	2	55.565775	12.969404
	4	Annetorp	0.043478	2	55.565775	12.969404

11	Almhög	0.032609	2	55.577421	13.020958
1	Almhög	0.032609	2	55.577421	13.020958
9	Borgmästaregården	0.030000	2	55.582970	12.996680
3	Annelund, Malmö	0.043478	2	55.588280	13.025830
98	Sibbarp, Malmö	0.029412	2	55.573860	12.920601
28	Gamla Limhamn	0.033333	2	55.583908	12.929530
80	Nydala, Malmö	0.031746	2	55.573596	13.020383
80	Nydala, Malmö	0.031746	2	55.573596	13.020383
90	Rosenvång	0.018519	2	55.582499	12.949237
90	Rosenvång	0.018519	2	55.582499	12.949237
32	Gullvik	0.020000	2	55.570773	13.029341
32	Gullvik	0.020000	2	55.570773	13.029341
42	Håkanstorp	0.035714	2	55.597678	13.042135
42	Håkanstorp	0.035714	2	55.597678	13.042135
45	Johanneslust	0.017544	2	55.602272	13.049070
45	Johanneslust	0.017544	2	55.602272	13.049070
34	Heleneholm	0.030000	2	55.576410	13.014040
34	Heleneholm	0.030000	2	55.576410	13.014040
87	Ribersborgsstranden	0.030000	2	55.602710	12.972870
87	Ribersborgsstranden	0.030000	2	55.602710	12.972870
86	Ribersborg	0.020000	2	55.602260	12.968360
86	Ribersborg	0.020000	2	55.602260	12.968360
136	Östra kyrkogården, Malmö	0.040000	2	55.592070	13.037940
73	Mellersta hamnen	0.037736	2	55.569097	12.975221
73	Mellersta hamnen	0.037736	2	55.569097	12.975221
75	Naffentorp	0.030303	2	55.545671	12.977351
75	Naffentorp	0.030303	2	55.545671	12.977351
28	Gamla Limhamn	0.033333	2	55.583908	12.929530
79	Nya Bellevue	0.018182	2	55.585190	12.956040
79	Nya Bellevue	0.018182	2	55.585190	12.956040
54	Kroksbäcksparken	0.043956	2	55.577580	12.979430
54	Kroksbäcksparken	0.043956	2	55.577580	12.979430
29	Gamla staden, Malmö	0.033333	2	55.583908	12.929530

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29	Gamla staden, Malmö	0.033333	2	55.583908	12.929530
56	Kronprinsen	0.040000	2	55.598390	12.985330
3	Annelund, Malmö	0.043478	2	55.588280	13.025830
56	Kronprinsen	0.040000	2	55.598390	12.985330
62	Limhamn	0.034483	2	55.581720	12.933450
63	Limhamns hamnområde	0.034483	2	55.581720	12.933450
63	Limhamns hamnområde	0.034483	2	55.581720	12.933450
64	Limhamns kalkbrott	0.032258	2	55.567275	12.921597
64	Limhamns kalkbrott	0.032258	2	55.567275	12.921597
66	Lindängen	0.023810	2	55.562210	13.019430
66	Lindängen	0.023810	2	55.562210	13.019430
98	Sibbarp, Malmö	0.029412	2	55.573860	12.920601
62	Limhamn	0.034483	2	55.581720	12.933450
136	Östra kyrkogården, Malmö	0.040000	2	55.592070	13.037940