

Scandinavian restaurant- where to open it in Helsinki?

FINAL REPORT FOR APPLIED DATA SCIENCE CAPSTONE



Business problem

- Business problem: in which neighborhood of Helsinki it would be recommended to open a new Scandinavian restaurant
- Helsinki is a capital of Finland
- Finland belongs to the Nordic countries together with Sweden, Norway, Denmark and Iceland.
- Scandinavian restaurants offer either local food from the specific country, or a mixture of menus from all Nordic countries



Targeted people interested in the topic

- People in the restaurant industry, thinking about opening a Scandinavian restaurant in Helsinki



Picture from: [pexels.com](https://www.pexels.com)

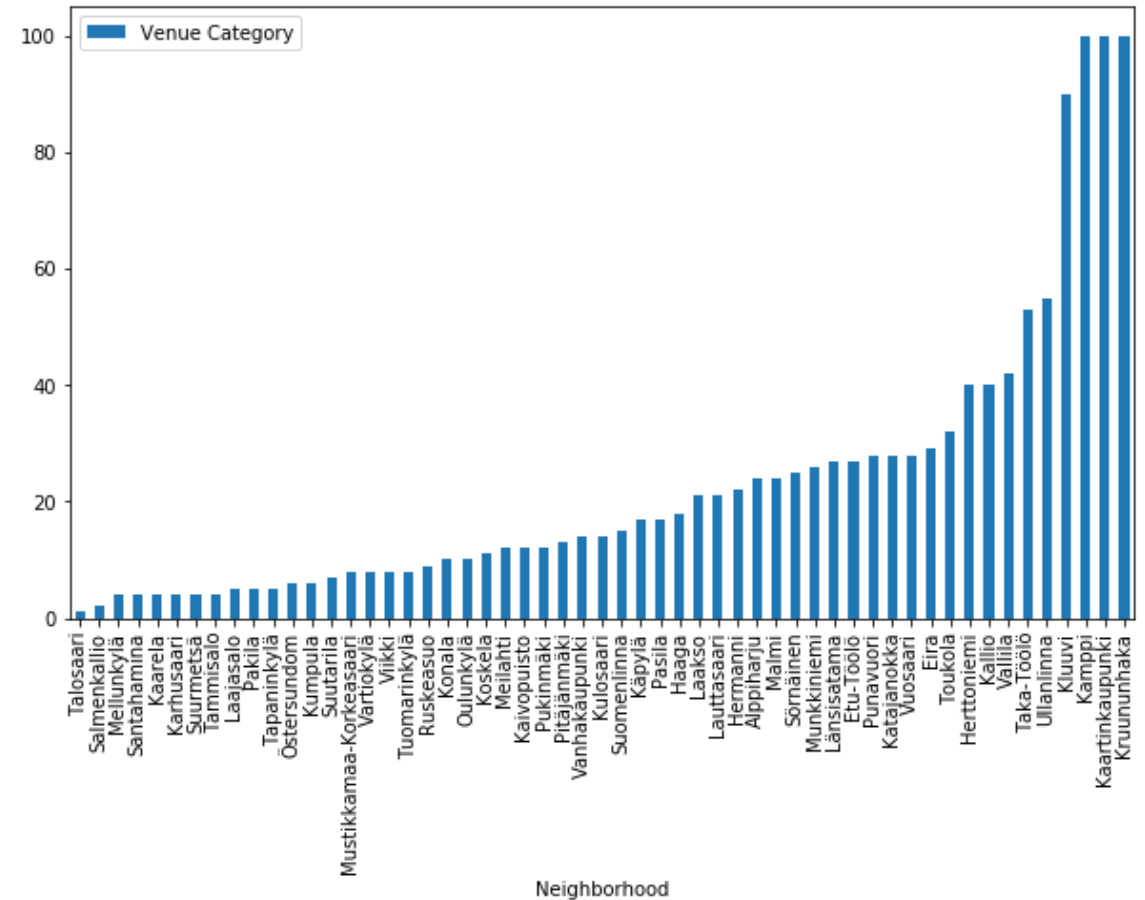
Data sources

Following data was used in the analysis:

- The neighborhoods of Helsinki - from Wikipedia page listing all the subdivisions of Helsinki: https://en.wikipedia.org/wiki/Subdivisions_of_Helsinki
- The geolocations of Helsinki neighborhoods - from Latitude web page: <https://latitude.to>
- The venue information for Helsinki neighborhoods - through Foursquare API: <https://developer.foursquare.com/places-api>

Obtaining Venues for each neighborhood

- Within 500 meters from the latitude and longitude information for each neighborhood:
 - max. 100 venues were fetched for each neighborhood from Foursquare API
- The chart shows how many venues were found for each neighborhood



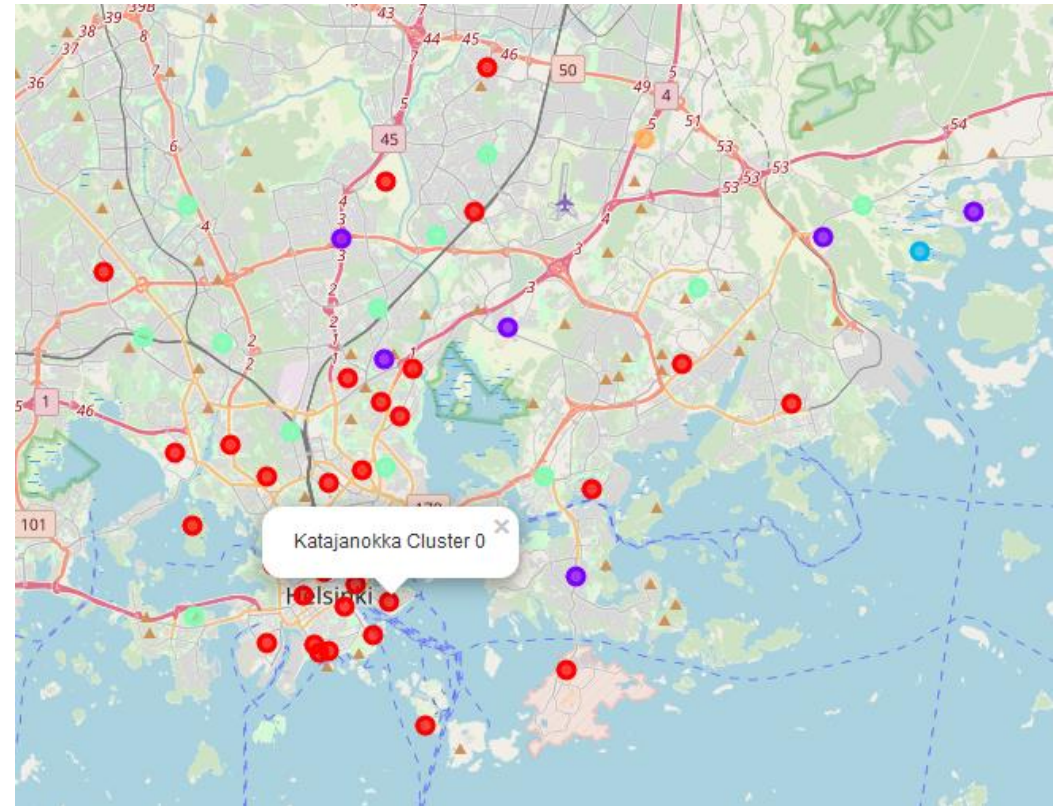
Getting the top 10 most common venues for each neighborhood

- For each neighborhood the top 10 most common venue categories were derived.
- The table shows example of the results for the first five neighborhoods.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Alppiharju	Theme Park Ride / Attraction	Dog Run	Park	Sushi Restaurant	Dance Studio	Bar	Pub	Event Space	Gym	Blini House
1	Eira	Scandinavian Restaurant	Park	Boat or Ferry	Playground	Café	Bakery	Bistro	Coffee Shop	Beach	Pizza Place
2	Etu-Töölö	Café	Scandinavian Restaurant	Pub	Park	Theater	Bay	Gym / Fitness Center	Supermarket	Bistro	Tennis Court
3	Haaga	Bus Stop	Garden	Pizza Place	Grocery Store	Bakery	Cafeteria	Asian Restaurant	Café	Platform	Indian Restaurant
4	Hermannii	Bus Stop	Pizza Place	Bar	Tram Station	Playground	Flea Market	Restaurant	Recycling Facility	Convenience Store	Sauna / Steam Room

Clustering

- With the help of the data on top 10 most common venues for each neighborhood,
 - Neighborhoods are clustered to 5 clusters
 - K-means clustering method is used
 - Target:
 - to distinguish the neighborhoods from each other
 - The map shows the result of the five clusters.
 - Cluster 0:
 - situated in the center of Helsinki
 - can be distinguished from other clusters by having clearly more restaurants in the most common venues than the other clusters
- ⇒ Selected for further analysis



Cluster 0: Neighborhoods without Scandinavian restaurant

- 18 neighborhoods out of 32 did not have Scandinavian restaurant in their top 10 most common venues
- Out of these 18, three neighborhoods were selected for further analysis
 - Kallio
 - Länsisatama
 - Kluuvi
- Rationale:
 - They are all situated in the area with the densest amount of people, either locals or tourists

Further analysis of 3 selected neighborhoods:

Neighborhood	Strengths	Weaknesses
Kallio	Trendiest neighborhood in Helsinki -> lots of people	Student district – not applicable for mid-high price level
Länsisatama	Cruise ships bringing a lot of tourists to Helsinki	Tourists leave the port area for the Helsinki center
Kluuvi	Commercial center of Helsinki -> both tourists and local people shopping / at work	-

Conclusion: Kluuvi

- Business problem: in which neighborhood of Helsinki it would be recommended to open a new Scandinavian restaurant
- Recommendation:
 - Open a new Scandinavian restaurant in Kluuvi
 - It is the commercial center of Helsinki
 - There are a lot of local people working / shopping, as well as tourists
 - It does not yet have Scandinavian restaurants in the top 10 most common venues, so there is probably a market place for one



Picture from: www.kluuvi.fi/tourists