

# *Coursera Capstone Project*

## *Battle of the Neighbourhoods*

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# Introduction / business problem

In a city of Helsinki, if someone is looking to open a café restaurant, the question is, where would you recommend that they open it? The background of the problem is that in order for a café to be profitable, there must be enough customers, and in order to have enough customers, it is not worth setting up a café in the immediate promixity of existing ones.

Let's also make sure that audience is explicitly defined to be the local restaurant entrepreuners in Helsinki and they should care about this problem because the location of the new café has a significant impact on the expected returns.

# Data

A description of the data: the data used to solve this problem is geolocation data collected from FourSquare. Adequate explanation and discussion, with examples, of the data is the following. Data is a single dataframe, containing at least a location of the café. Explanation of the location data is a standard tuple (lat, lng), where lat stands for latitude and lng for longitude. Some other metadata like name, postal code and so on is also collected, but let us discuss that they are not absolutely necessary for the analysis.

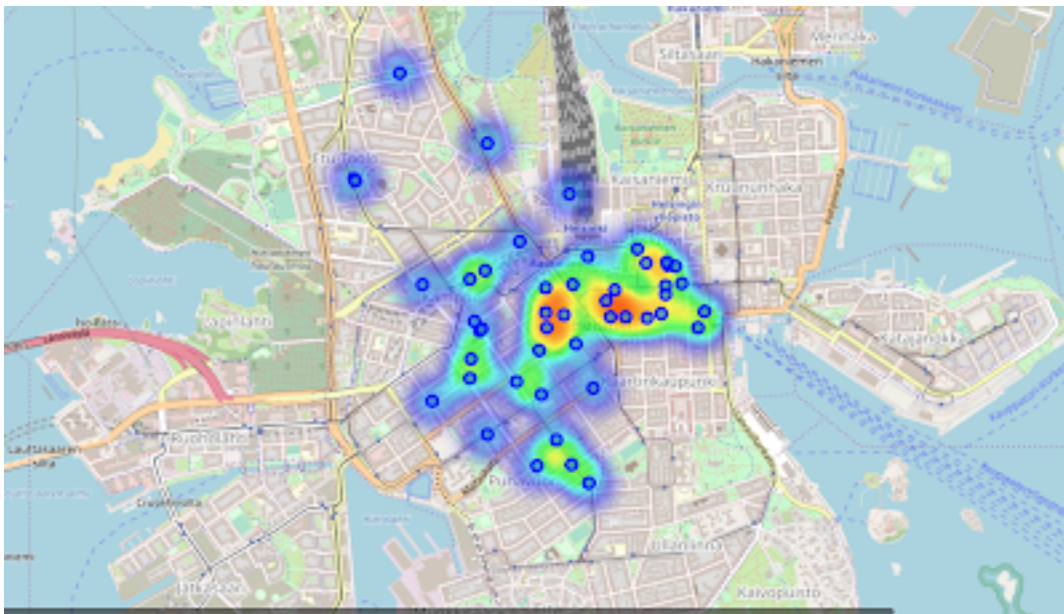
Example of the data:

identifier	Name	Shortname	Address	Postalcode	Latitude	Londitude
4ddd2d44b0fba481fc927360	Patisserie Teemu & Markus	Bakery	Yrjönkatu 25	00100	60.167899	24.938190
50f688d5e4b023d2f274b506	Kaffecentralen	Coffee Shop	Fredrikinkatu 59	00100	60.167580	24.932526
5aec747112f0a9002c9b92ab	La Torrefazione	Café	Mannerheimintie 22	00100	60.170721	24.936158
4b4cb879f964a520c0bb26e3	The Ounce	Tea Room	Fredrikinkatu 55	00100	60.167182	24.932993
4af1c9e2f964a52031e321e3	La Torrefazione	Coffee Shop	Aleksanterinkatu 50	00100	60.168877	24.943845

# Methodology

The methodology in this project consists of two parts:

- Exploratory Data Analysis: Visualise the coffee shop in Helsinki to understand the most suitable zone to open a Café
- Modelling: To help people find the best location I generated a heatmap to understand the best zone with low numbers of café immediately near and an average zone covering

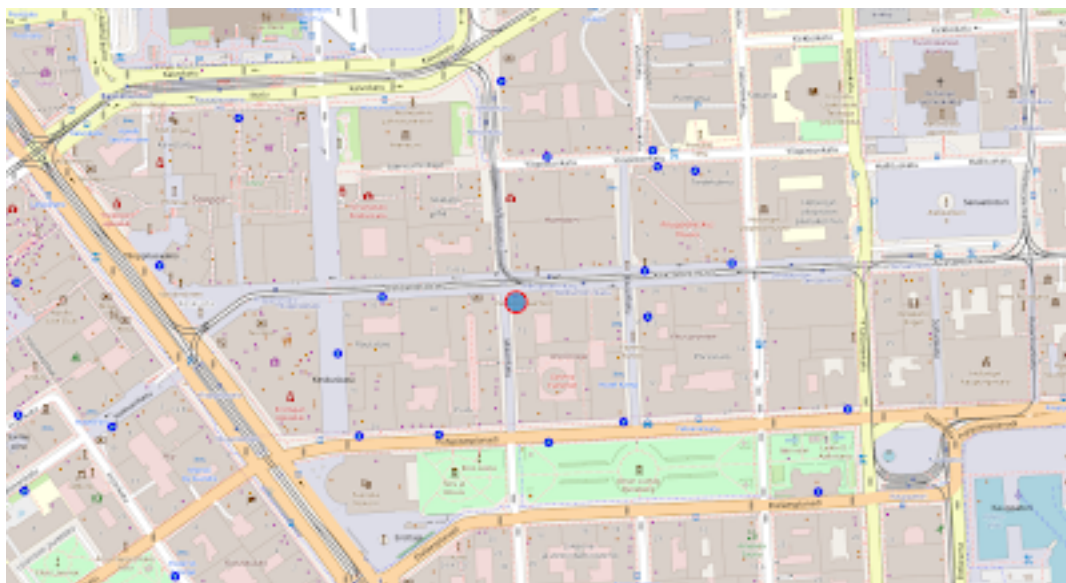


As you can see the heat-map points in the city center, and above all the north-easter zone, near the central station, seems to be the best spot to open a Café/Resturant.

Closing in, we can find the perfect spot for the opening of the cafe based on the map findings

# Results and Discussion

The aim of this project is to help open any kind of shop in any city. For example if a person is looking to open any other restaurant, a simple change in the Foursquare call could give us the bike stores locations, hence helping us open a new shop. As our aim was to find the perfect spot for a café, we delimited the city center as the best option and, using the heatmap, we found a spot without many coffe shops and near two very trafficked streets: between Aleksanterinkatu and Mikonkatu



## Conclusion

This project helps a person get a better understanding the coffee economy in Helsinki. It is always helpful to make use of technology to stay one step ahead. For every kind of shop added value could be generated by adding more map (i.e. public transportation mapping overlap, nearest shopping mall) that can predict more accurately if your shop can have success in a peculiar area