Café in Helsinki

Introduction

- 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.

Data acquisition and cleaning

- **T**he data used to solve this problem is geolocation data collected from [FourSquare](#).

- Data is a single dataframe, containing at least a location of the café.

- **Data will be used** in the following way: by knowing the locations of already existing cafes, it's possible to apply unsupervised learning technique like kernel density estimation (KDE) to determine the area of influence of the existing cafes, and start up new café which is not in the area of influence.

```
df = pd.DataFrame(df_raw, columns=["uid", "name", "shortname", "address", "postalcode", "lat", "lng"])
print("found %i cafes" % len(df))
df.head()
```

found 46 cafes

	uid	name	shortname	address	postalcode	lat	lng
0	50f688d5e4b023d2f274b506	Kaffecentralen	Coffee Shop	Fredrikinkatu 59	00100	60.167580	24.932526
1	4ddd2d44b0fba481fc927360	Patisserie Teemu & Markus	Bakery	Yrjönkatu 25	00100	60.167899	24.938190
2	5aec747112f0a9002c9b92ab	La Torrefazione	Café	Mannerheimintie 22	00100	60.170721	24.936158
3	4b4cb879f964a520c0bb26e3	The Ounce	Tea Room	Fredrikinkatu 55	00100	60.167182	24.932993
4	556f2874498e103ac120a121	Kissakahvila Helkatti	Pet Café	Fredrikinkatu 55	00100	60.167274	24.933142

Some density based estimator is giving a good tip where to start a new coffee business. There's a HeatMap plugin ready in Fol
map

```
helsinki_center = d["geocode"]["center"]
helsinki_center
```
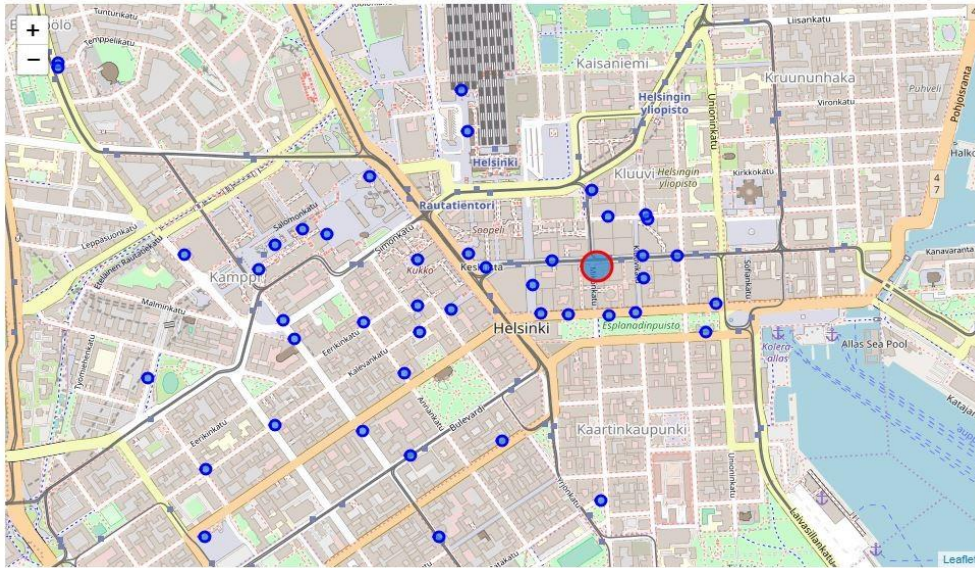
]: {'lat': 60.16952, 'lng': 24.93545}

```
from folium import plugins
```

Result

Conclusion and future directions

- Before starting a business, some further data analysis of the optimal location of shop may be require.
- Optimal location for a new coffee shop in center of Helsinki was estimated based on data from FourSquare.