Selecting neighbourhood for opening new pizza restaurant in Helsinki
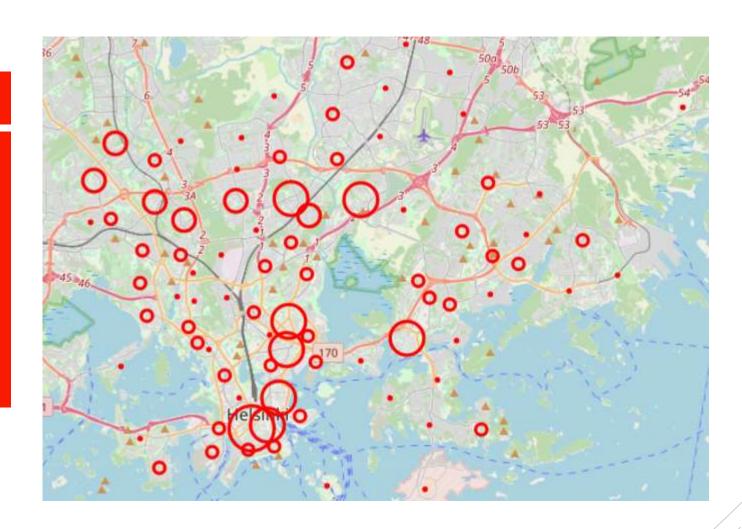
Selecting neighbourhood for opening new pizza restaurant in Helsinki

- Covid19 has changed restaurant market and there is more demand for places where with take away and home delivery services.

- Pizza restaurants is most common type of restaurants in Helsinki area providing such services.

- Some neighbourhoods might have not enough population or are scarcely populated and thus market size is not sufficient to open new joint.

- At the same time competition in some neighbourhoods is already on high level and it might not be viable to open new pizza restaurants.

- This presentation will give you an indication in which neighbourhoods in Helsinki there is still market potential for opening new pizza restaurant.

Pizza restaurants in Helsinki's neighbourhoods.

Current restaurants are are mainly located in city centre or its vicinity, however there are no pizza restaurants in 35 neighbourhoods ou t 84, can which of those neighbourhoods has largest or is there market potential in thos neighbourhoods where pizza restautaurants already exist?

To find most viable neighbourhood for a new restaurant , we used 4 different algorithms:

1. SVM
2. KKN
3. Logistic regression
4. Decision tree

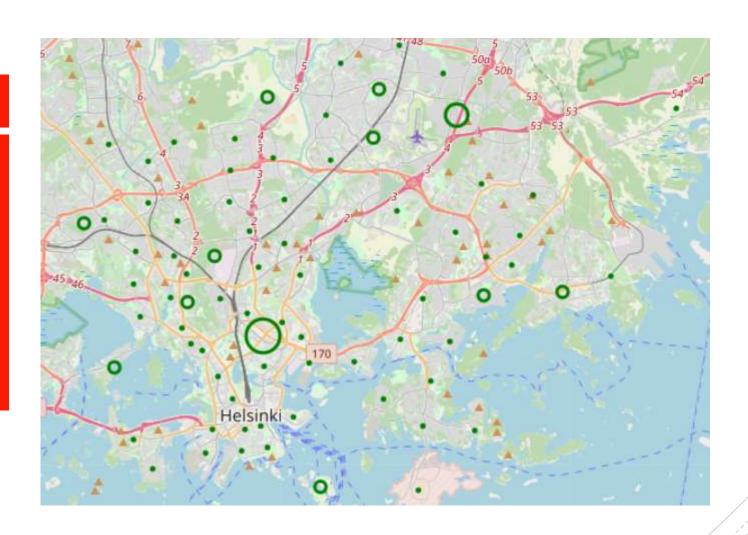# Independent variables to estimate how many restaurants should be in each of neighbourhood

a. Area: how large post index area is.
b. Number of people working in selected area.
c. Total population.
d. Adult population (over 18 years old population).
e. Average income per inhabitant
f. Median income per inhabitant
g. Number of households
h. Average size of households
i. Average income per household
j. Median income per household

The most accurate result where received from Decision tree model

Algorithm	Jaccard	F1-score
KNN	0.312924	0.452886
Decision Tree	0.612223	0.757766
SVM	0.316764	0.456410
Logistic Regression	0.288503	0.427419

Potential neighbourhoods for viable pizza restaurant.

By deducting from estimations existing numer of venues we receive market potential for pizza restaurant for each neighbourhood in Helsinki

Conclusions and recommendations

- Even though based on algorithm there is market potential for pizza restaurant in neighbourhoods presented on the map, it hard to give clear recommendation before more detailed analysis what kind of restaurants are already available in those neighbourhoods. Nevertheless this approach can clearly add value for decision making process and thus improve one's ability to make better decisions.

- Also it is good to notice that created model can be used to analyse other types of venues in similar manner and in different municipalities in Finland.

Data sources:

Finland's national statistics: www.stat.fi, Free Power Query (M) generator for Statistical OpenDATA from PXWeb will be used to collect required data https://stat.qumio.com/

Finland's neighbourhood location data: https://www.avoindata.fi/data/fi/dataset/postcodes

Foursquare venue data