IBM DATA SCIENCE CAPSTONE PROJECT

FINDING A PLACE FOR A NEW RUIN PUB IN BUDAPEST

INTRODUCTION/BUSINESS PROBLEM

Introduction:

- The so-called ruin pub is a restaurant/pub developed from a ruined area, or building that is architecturally deliberately left in a ruined state

- Ruin pubs are very famous among turists in Budapest

- It is a saturated market, there are a lot of ruin pubs in the central districts of Budapest

Business problem:

- Which is the best place (district) to open a new ruin pub?

DATA TO USE

- The backbone of the research is the **Foursquare** spatial data (is collected by the Foursquare API)

- Other data used in the research is the **house prices** (collected from https://www.ingatlannet.hu/) and the **number of guest nights** per district (collected from http://statinfo.ksh.hu/)

DATA TO USE

- The backbone of the research is the **Foursquare** spatial data (is collected by the Foursquare API)

- Other data used in the research is the **house prices** (collected from https://www.ingatlannet.hu/) and the **number of guest nights** per district (collected from http://statinfo.ksh.hu/)

METHODOLOGY

- **Clustering** the districts using the k-means clustering algorithm
- **Analysis of statistical data** (number of guest nights and average house prices by district)
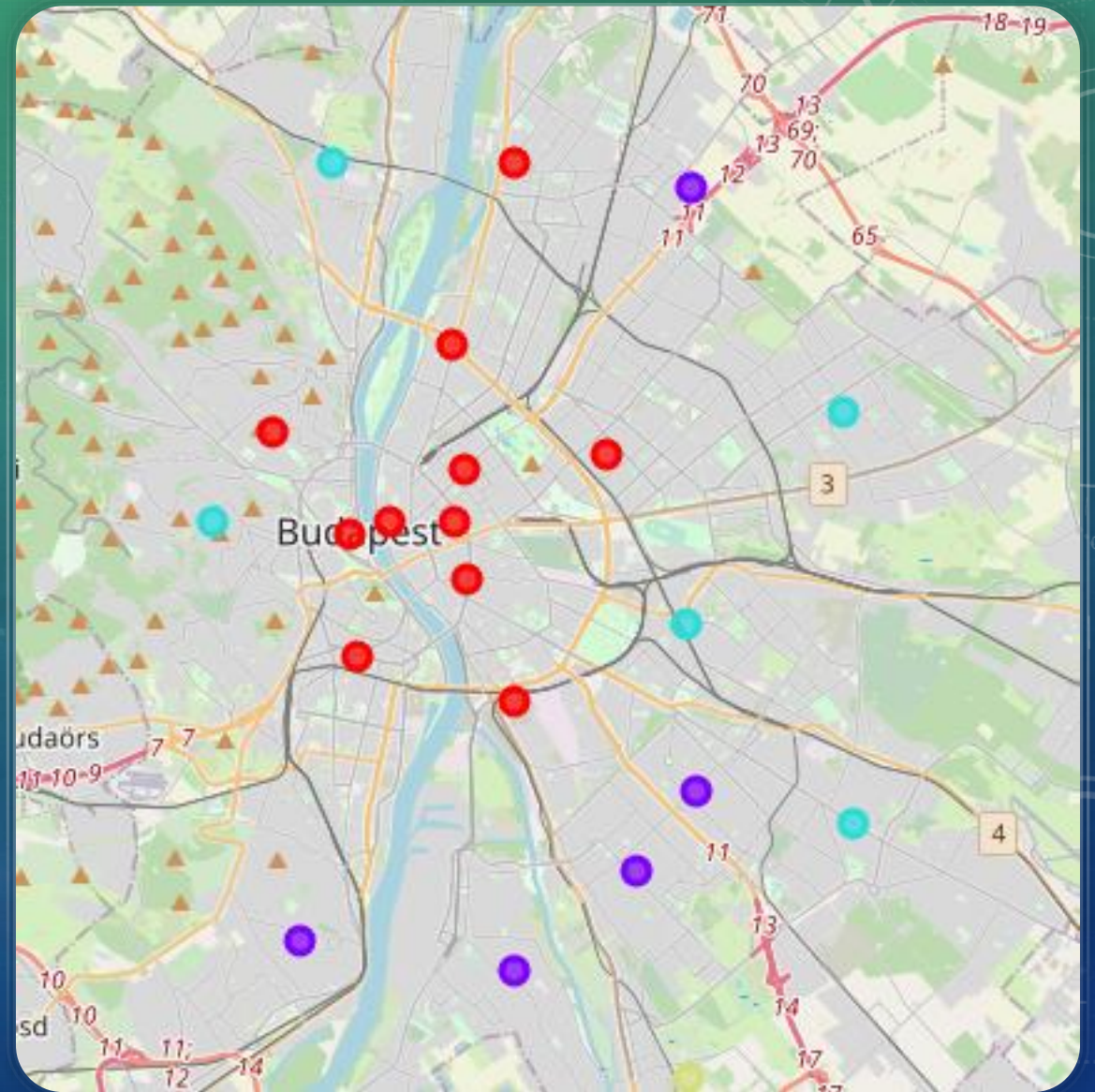
CLUSTERING

K-means clustering algorithm with 4 clusters:

- Cluster0 contained 11 districts including the 7th district (Erzsebetvaros) and the 5th district (Belvaros)with mostly café shops, bars and hotels in first places. Looking at the map we can se that these are the inner districts of Budapest

- Cluster1 contained 5 districts with mostly grocery stores, bus tops and parks in first places

- Cluster2 contained 6 districts including the with very similar characteristics to the Cluster1 but further from the city center

- Cluster3 contained only 1 district (Soroksar) which is the most rural district of Budapest so that farm come in first place is not a surprise
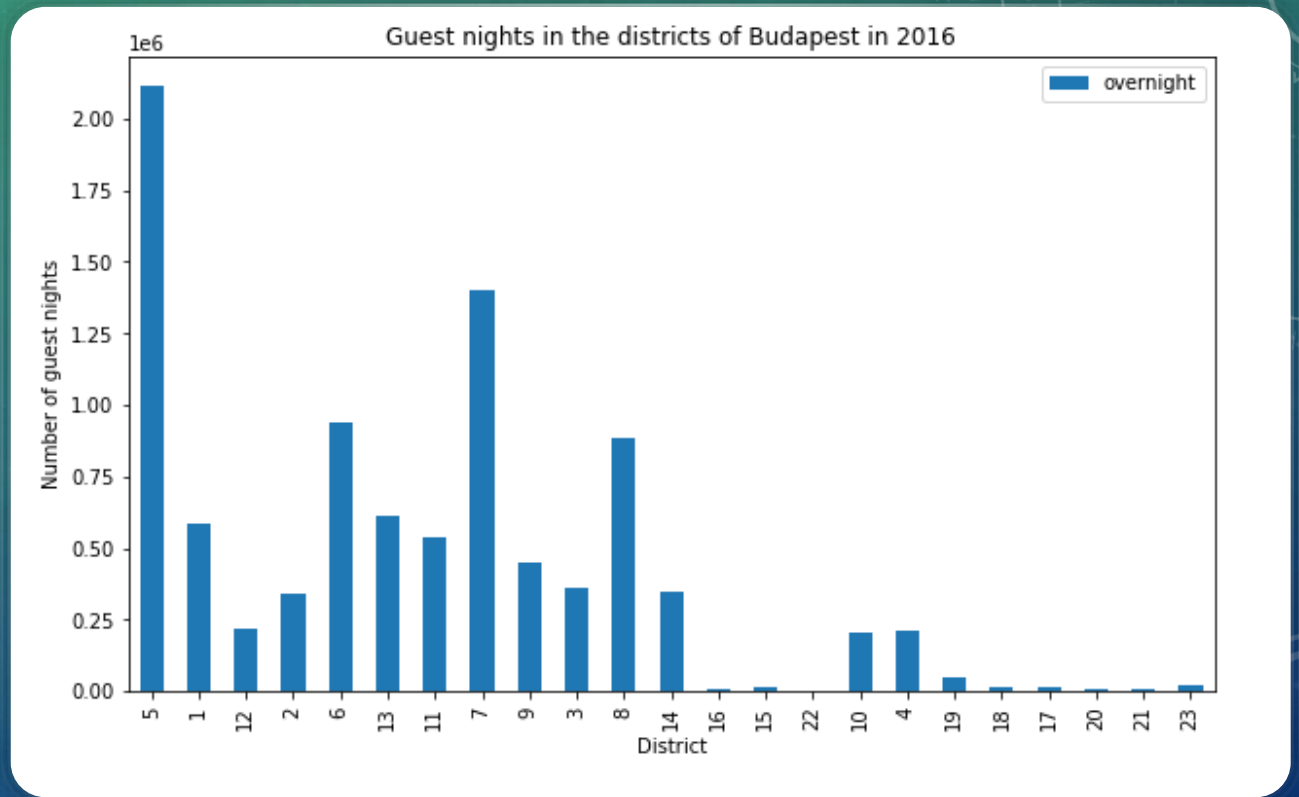
CLUSTERING

Map of the clusters

- Cluster0 = red
- Cluster1 = lilac
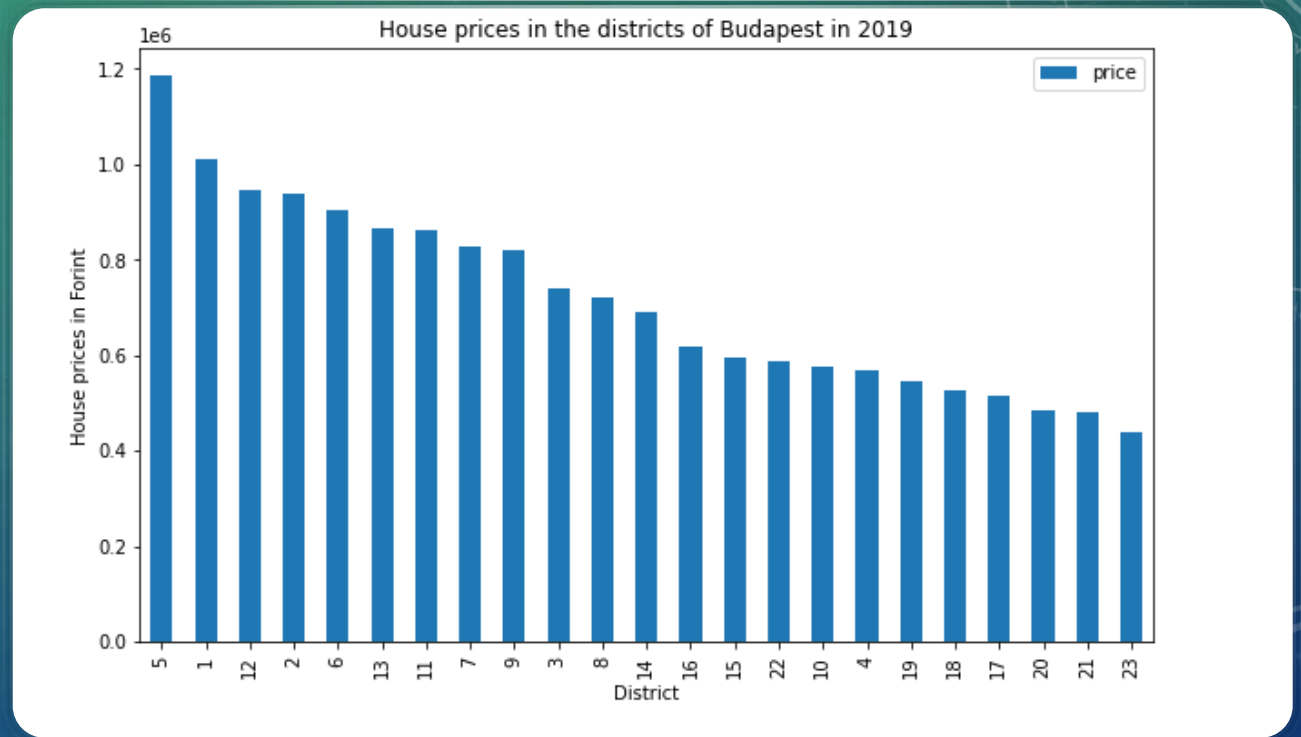- Cluster2 = light blue
- Cluster3 = yellow

GUEST NIGHTS

- Most guest nights are in those districts where the majority of ruin pubs are located (5th and 7th)

- Other districts with a lot of guest nights are the 6th, 8th followed by the 13th, 1st and 11th.

Guest nights in the districts of Budapest in 2016

HOUSE PRICES

- The house prices are clearly the highest in the 5th district followed by the 1st, 12th, 2nd and 6th.

DISCUSSION AND CONCLUSION

- There is only one district that got everything we are looking for: District 8th (Jozsefvaros).

- It is in Cluster0, there were a lot of guest nights in 2016 and the house prices (and thus the rent costs) are one of the lowest from the inner districts.

- So it is the perfect place to open a new ruin pub.