

# Introduction

 Budapest is a large city, cultural and commercial center.

• 4 million tourists arrive in Budapest for every year.

• There are more than a thousand restaurants, cafés and entertainment venues in the city.

• In a few years six restaurants have received Michelin stars.





# Businness problem

- What facts should we consider when determining the location of a restaurant?
- When choosing a place, is it worth considering, for example, the most visited places in the city?
- If there are already restaurants that have good ratings, will it be risky to open a new one near them?

03

# Data acquisition and cleaning

#### Free datasets:

- https://en.wikipedia.org/wiki/Districts of Budapest
- https://developer.foursquare.com/docs/data

We use the Foursquare Location app to get the number of restaurant locations per district, which gives us an idea of what places people visit if they want to eat.



# Data Cleaning

We transform the dataset to show 20 venues to work with.

We merge the dataframes together for a comprehensive set of values, worth analysing.

	District	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	11th Most Common Venue
0	l. kerület	Café	Hotel	Hungarian Restaurant	Plaza	Coffee Shop	Pub	Scenic Lookout	Bistro	Bar	Dessert Shop	Park
1	II. kerület	Athletics & Sports	Tennis Court	Park	Bus Stop	Playground	Campground	Forest	Scenic Lookout	Soccer Field	Track	Fast Food Restaurant
2	III. kerület	Train Station	Bus Station	Bus Stop	Heliport	Fast Food Restaurant	Furniture / Home Store	Fruit & Vegetable Store	Fried Chicken Joint	French Restaurant	Forest	Food Court
3	IV. kerület	Fast Food Restaurant	Dessert Shop	Burger Joint	Bar	Gastropub	Park	Grocery Store	Supermarket	Café	Furniture / Home Store	Sporting Goods Shop
4	IX. kerület	Tram Station	Train Station	Soccer Field	Arcade	Café	Dance Studio	Brewery	Electronics Store	Bus Station	Office	Forest
5	V. kerület	Hotel	Hungarian Restaurant	Italian Restaurant	Coffee Shop	Dessert Shop	Restaurant	Cocktail Bar	Pizza Place	Wine Bar	Ice Cream Shop	Modern European Restaurant
6	VI. kerület	Coffee Shop	Bar	Hostel	Italian Restaurant	Ice Cream Shop	Thai Restaurant	Theater	Bakery	Indian Restaurant	Escape Room	Pub

# Data Analysis I.

I placed the districts onto the map and analised the similar ones against other and within clusters themselves.

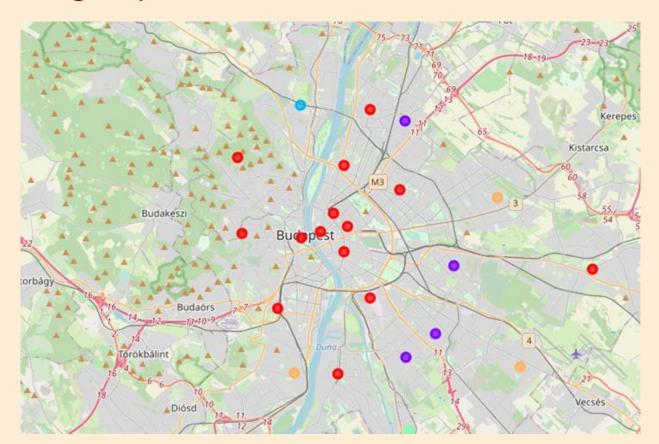


F	formal_name	District	Size km²	Population	latitude	longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	I. kerület	Várkerület ("Castle District")	3.41	25,196	47.496822	19.037458	0	Café	Hotel	Hungarian Restaurant	Plaza	Coffee Shop
1	II. <mark>ke</mark> rület		36.34	89,903	47.539333	18.986934	0	Athletics & Sports	Tennis Court	Park	Bus Stop	Playground
2	III. kerület	Óbuda- Békásmegyer ("Old Buda- Békásmegyer")	39.70	130,415	47.567177	19.036852	2	Train Station	Bus Station	Bus Stop	Heliport	Fast Food Restaurant
3	IV. kerület	Újpest ("New Pest")	18.82	101,558	47.564891	19.091315	0	Fast Food Restaurant	Dessert Shop	Burger Joint	Bar	Gastropub
4	V. kerület	Belváros- Lipótváros ("Inner City - Leopold Town")	2.59	26,284	47.500232	19.052018	0	Hotel	Hungarian Restaurant	Italian Restaurant	Coffee Shop	Dessert Shop

# Data Analysis II.

I placed the districts onto the map and analised the similar ones against other and within clusters themselves.

I use k-mens to group the districts to 5 clusters.



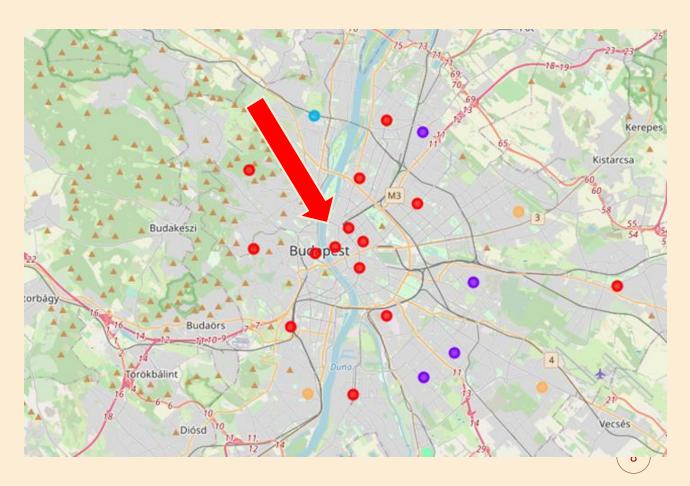
## Results I.

Cluster 0 includes districts where cafes, bars, and restaurants are typically the most common locations. These are the central and middle districts of Budapest.

There are already many excellent restaurants, bars and cafes in the central districts of Budapest (cluster 0).

#### lf

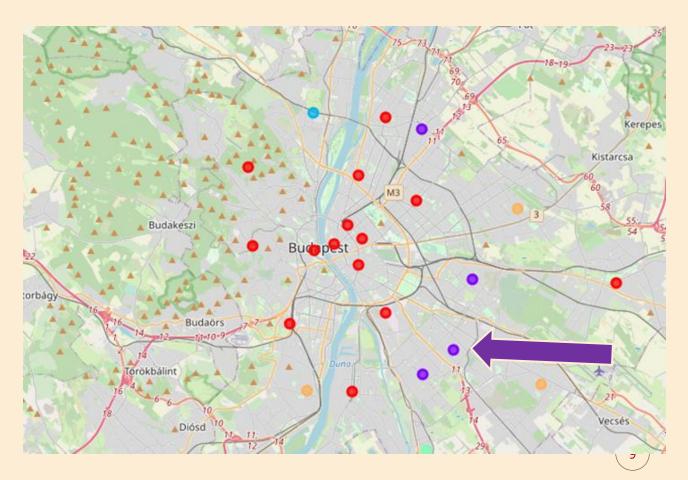
- we are strong enough,
- we can compete,
- we have enough capital, as there will be the highest rents here,
- we can serve high quality food



### Results II.

The parts of the eastern districts (cluster 1) bordering the central districts may be suitable for opening restaurants, as the rents are lower, guests and tourists can come here from the central districts.

They may be suitable for starting a new restaurant or developing smaller restaurants.



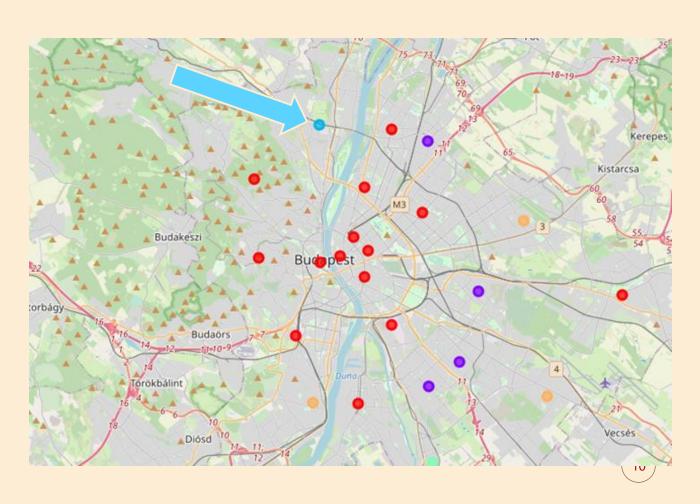
## Results III.

One district was included in cluster 2. district III.

There are public transport stations and restaurants, but it is far from the central busy districts.

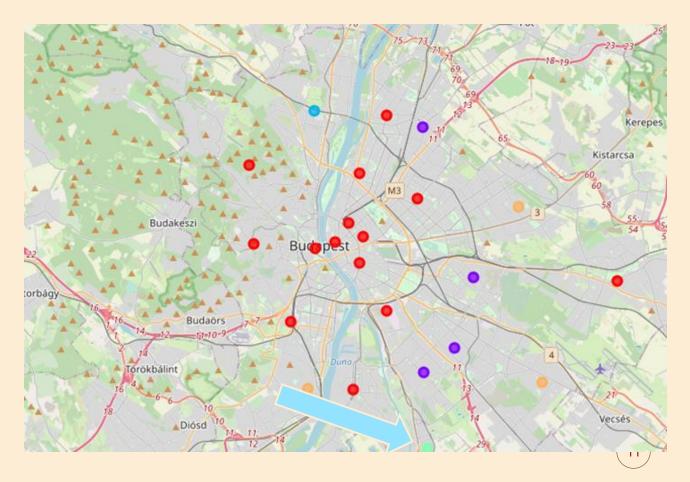
Tourists do not visit this district, but many people living (130,000) or working here.

It can also be a good place to open smaller restaurants.



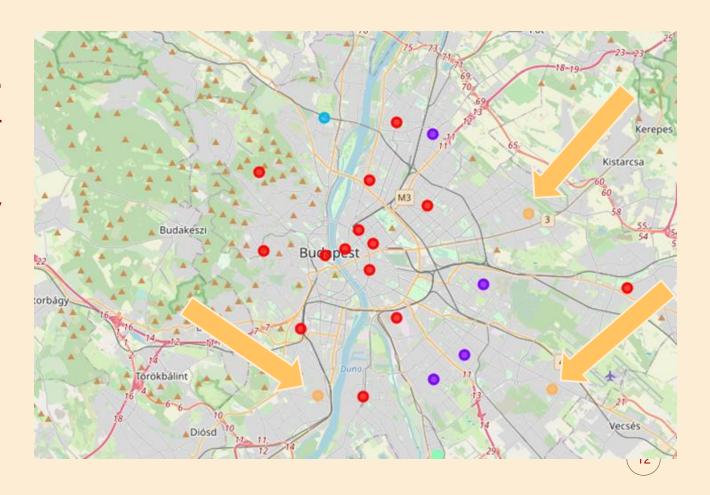
## Results IV.

In district XXIII (cluster 3) there are mainly shops and department stores, so it is worth thinking about opening fast food restaurants here.



## Results V.

In the outer districts of the cluster 4, we should consider opening buffets and cafes, because there are mainly stations, sports fields, playgrounds and shops.





## **Discussion**

The question of which part of Budapest is most worth opening a restaurant can be answered depending on the nature of our restaurant and how prepared we are for the presence of competitors.



# Thank you for your attantion!

**Peter Schwindt**