



# Coursera Capstone

**“Fashion Clothing Store”  
Choosing the best district in Zagreb, (Croatia)**



# Introduction

Based on demographics data, and on machine learning models, we might be able to determine which district would be best choice for our new business.

Which in this case happens to be:

„Fashion Clothing store”

# Data

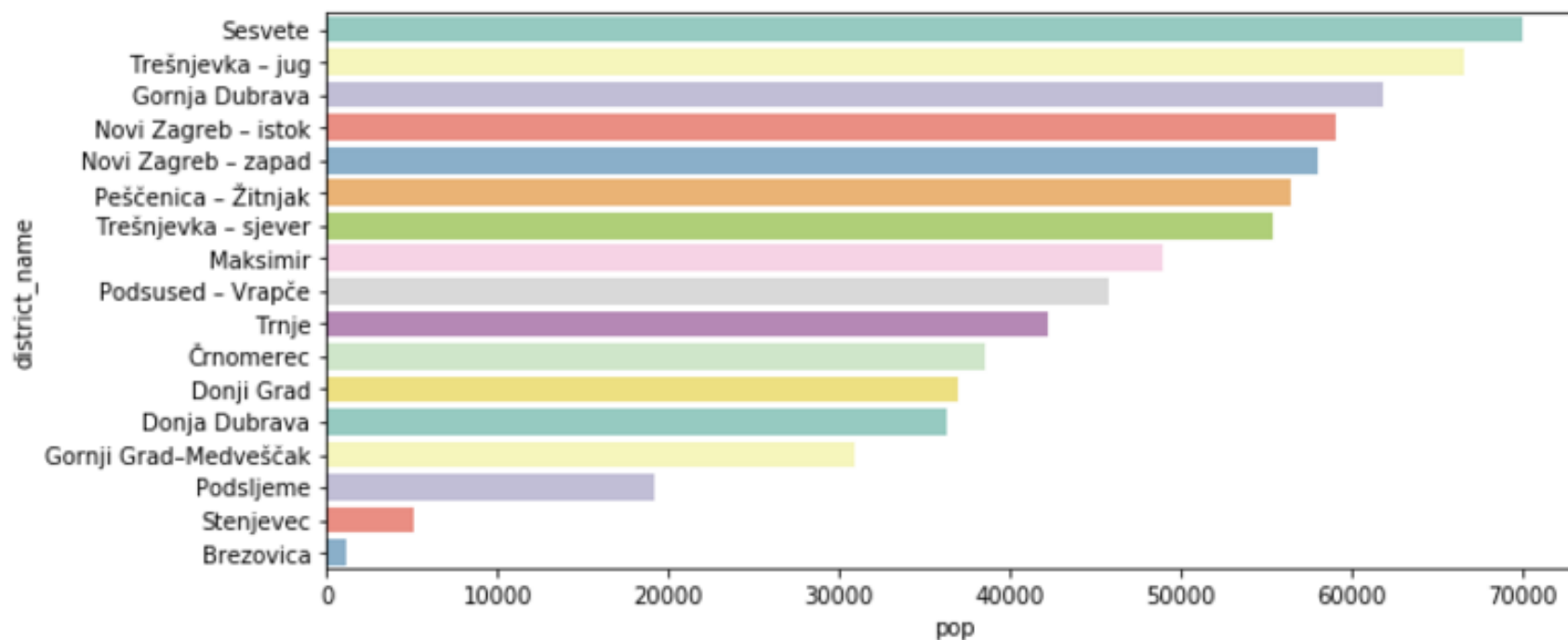
Most of data was collected from the internet and put into spread sheet document. Some of it like data from maps had to be literally written down by hand and added to the dataset.

[https://en.wikipedia.org/wiki/Districts\\_of\\_Zagreb](https://en.wikipedia.org/wiki/Districts_of_Zagreb)

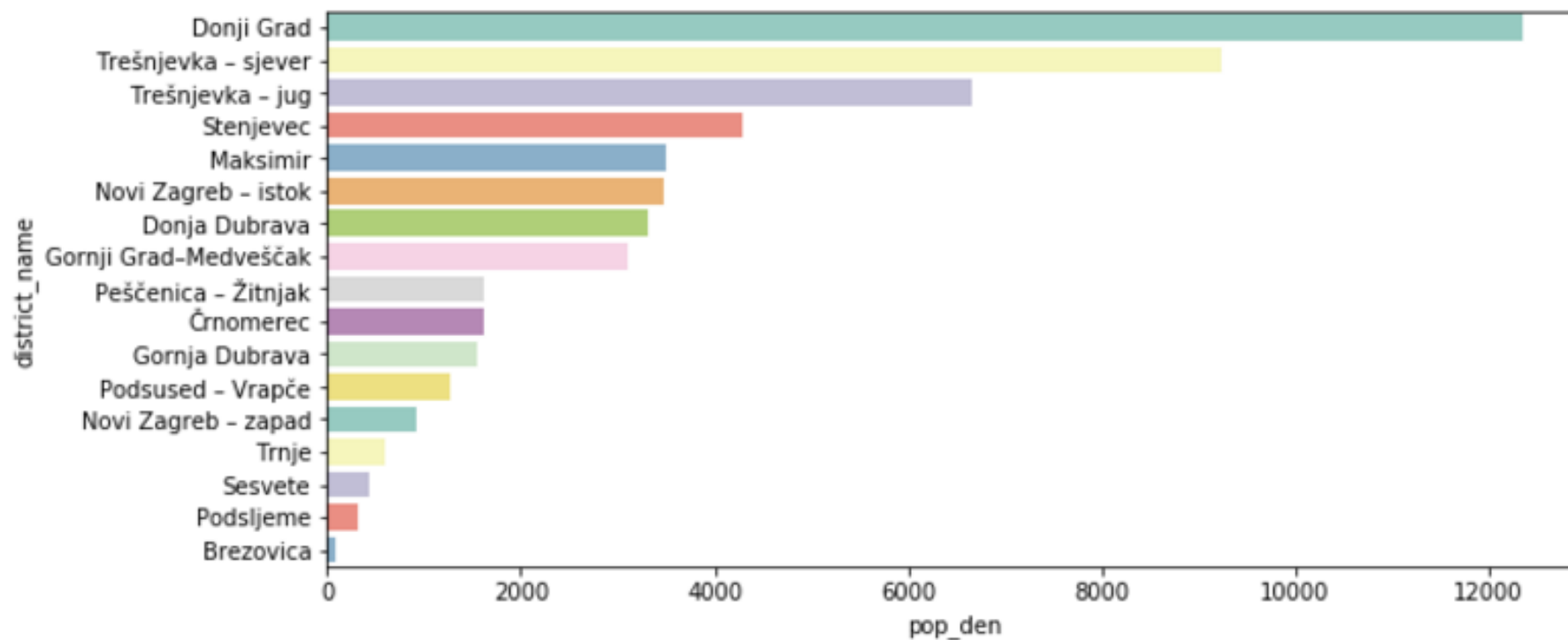
<https://www.zagreb.hr/statistika/30>

<https://zagreb.maps.arcgis.com/apps/MapSeries/index.html?appid=73e33727fad74298a9df9859a2331cd6>

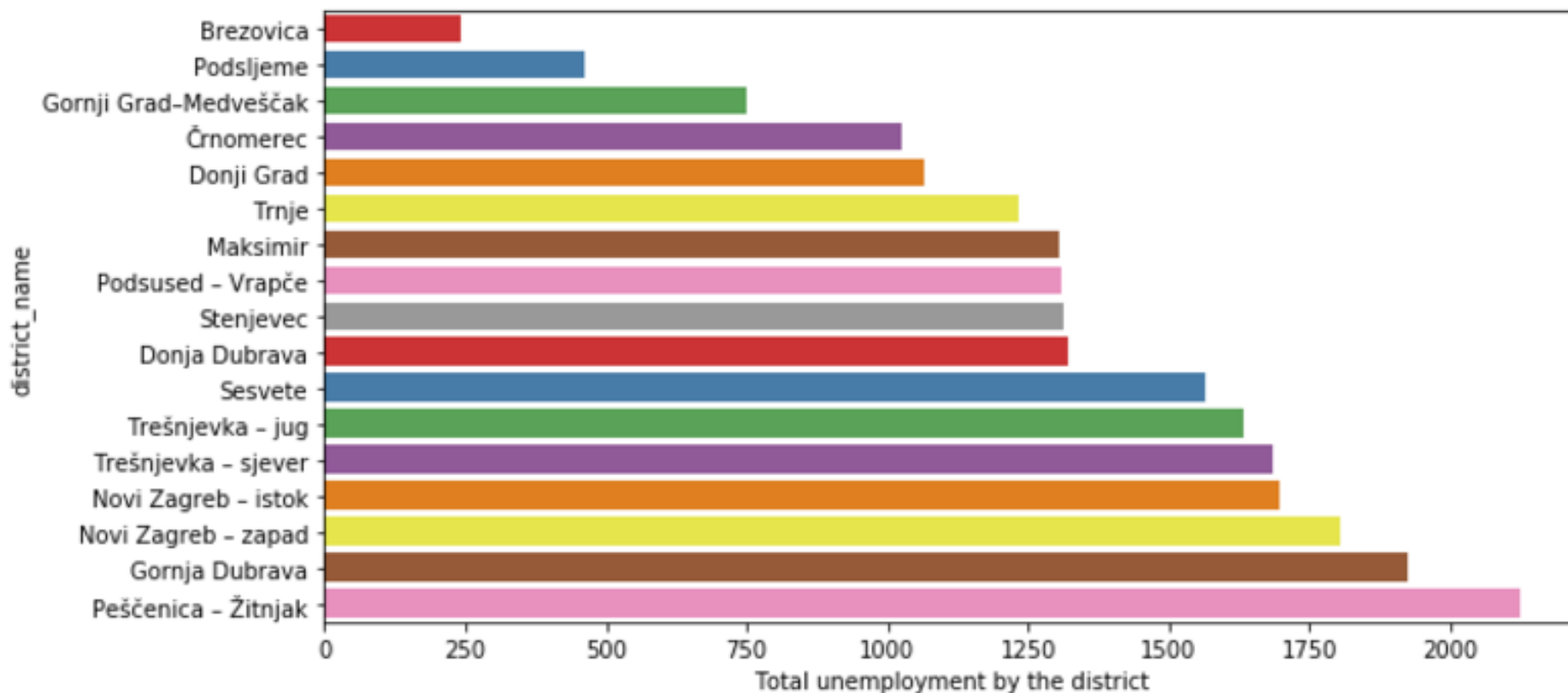
# Population



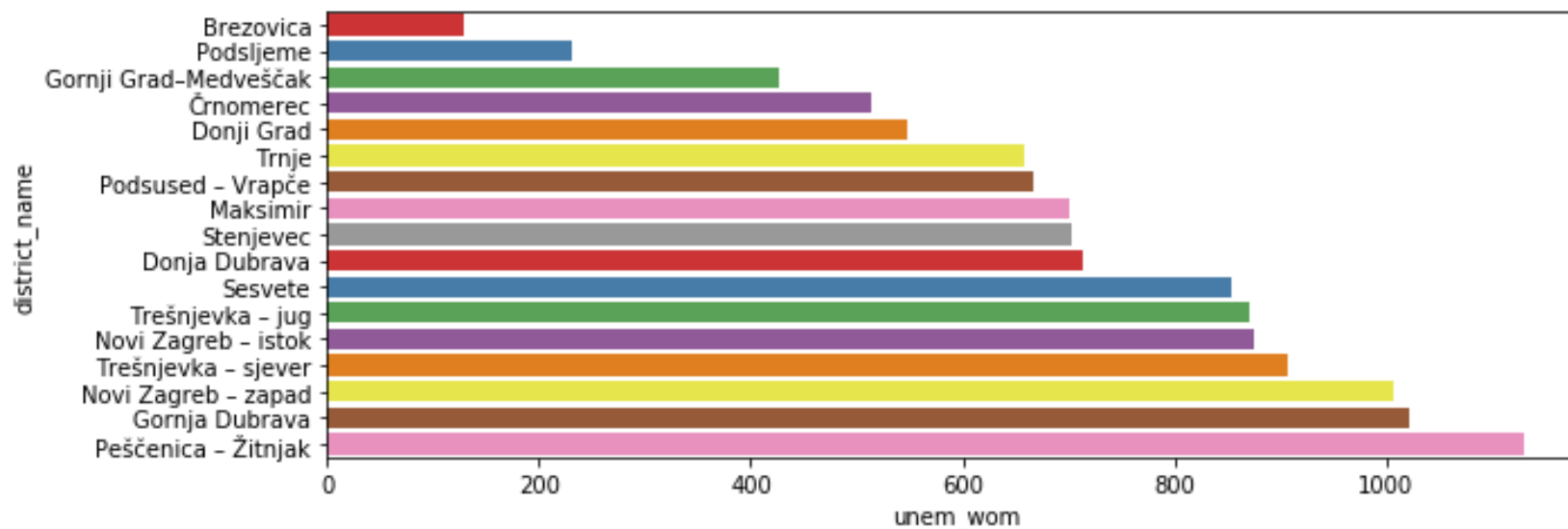
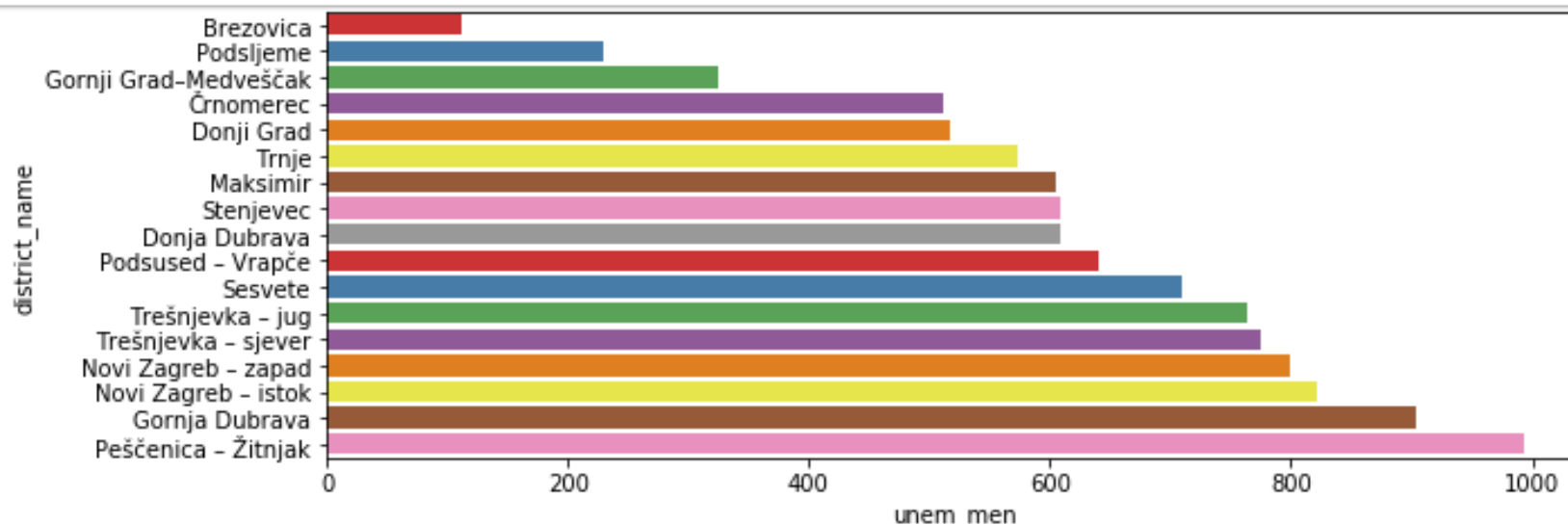
# Population density



# Unemployment



# By gender



# Unique venue categories

[16]:

	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
District						
Donji Grad	100	100	100	100	100	100
Trnje	70	70	70	70	70	70
Trešnjevka – jug	62	62	62	62	62	62
Stenjevec	54	54	54	54	54	54
Novi Zagreb – istok	53	53	53	53	53	53
Novi Zagreb – zapad	48	48	48	48	48	48
Trešnjevka – sjever	47	47	47	47	47	47
Donja Dubrava	36	36	36	36	36	36
Gornji Grad–Medveščak	35	35	35	35	35	35
Peščenica – Žitnjak	16	16	16	16	16	16
Gornja Dubrava	15	15	15	15	15	15
Podsljeme	13	13	13	13	13	13
Podsused – Vrapče	12	12	12	12	12	12
Maksimir	11	11	11	11	11	11
Sesvete	10	10	10	10	10	10
Črnomerec	4	4	4	4	4	4

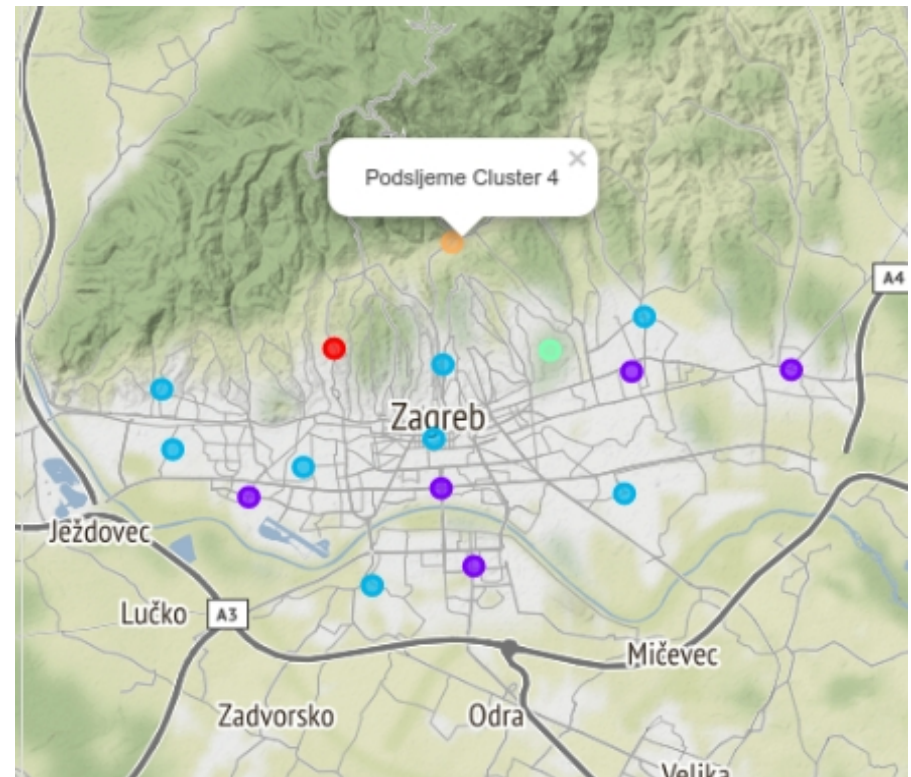
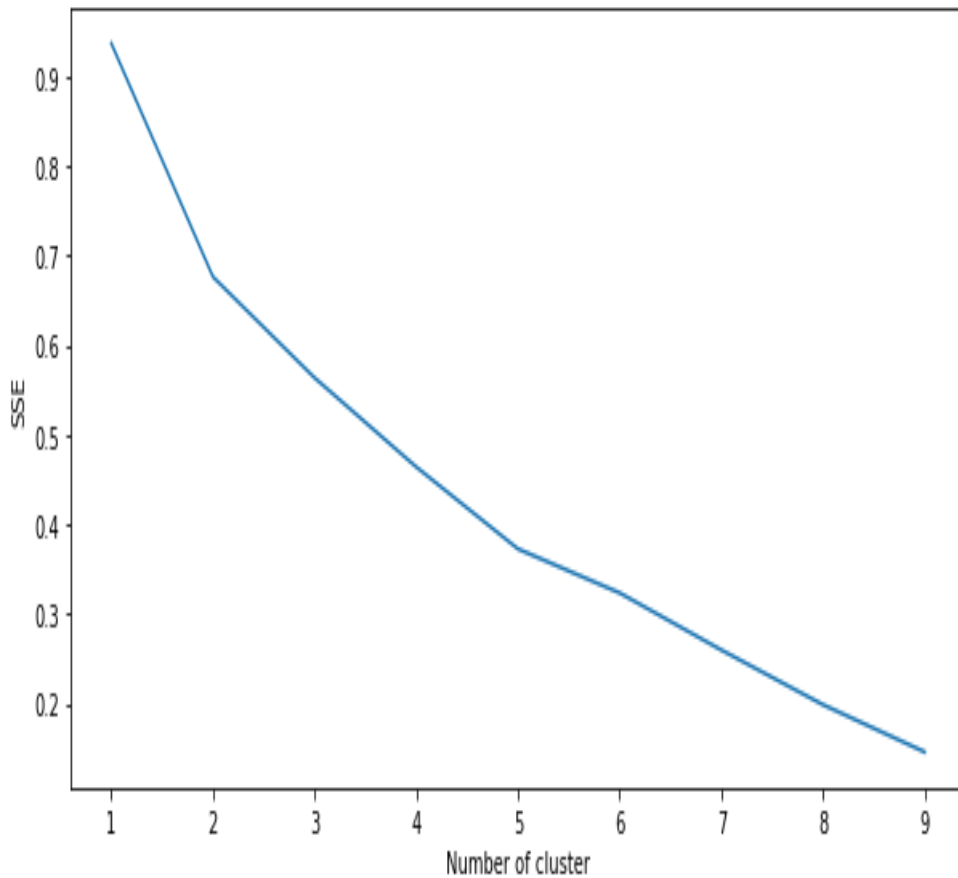


# Most common venues

[143]:

	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
0	Donja Dubrava	Café	Pizza Place	Bar	Supermarket	Light Rail Station	Gym / Fitness Center	Coffee Shop	Grocery Store	Pharmacy	Market
1	Donji Grad	Plaza	Bar	Café	Restaurant	Dessert Shop	Hotel	Hostel	Theater	Italian Restaurant	Mediterranean Restaurant
2	Gornja Dubrava	Grocery Store	Pharmacy	Bar	Supermarket	Coffee Shop	Clothing Store	Bakery	Women's Store	Café	Shopping Mall
3	Gornji Grad–Medveščak	Dessert Shop	Café	Bar	Supermarket	Pizza Place	Nightclub	Lounge	Pub	Chinese Restaurant	Multiplex
4	Maksimir	Café	Lake	Supermarket	Grocery Store	Soccer Field	Restaurant	Bus Station	Farmers Market	Electronics Store	Eastern European Restaurant
5	Novi Zagreb – istok	Café	Pizza Place	Supermarket	BBQ Joint	Pet Store	Smoke Shop	Bakery	Grocery Store	Bar	Italian Restaurant
6	Novi Zagreb – zapad	Café	Grocery Store	Bakery	Clothing Store	Liquor Store	Pizza Place	Dessert Shop	Bus Station	Mobile Phone Shop	Bar
7	Peščenica – Žitnjak	Fast Food Restaurant	Hardware Store	Bar	Multiplex	Chinese Restaurant	Drugstore	Café	Bus Station	Food	Shopping Mall
8	Podsljeme	Restaurant	Light Rail Station	Café	Market	Fruit & Vegetable Store	Grocery Store	Travel & Transport	Trail	Mountain	Electronics Store
9	Podsused – Vrapče	Supermarket	Chinese Restaurant	Restaurant	Café	Soccer Field	Sports Club	Bar	BBQ Joint	Park	Pizza Place

# Clustering districts (k - Means)



# Venues of interest

[96]:

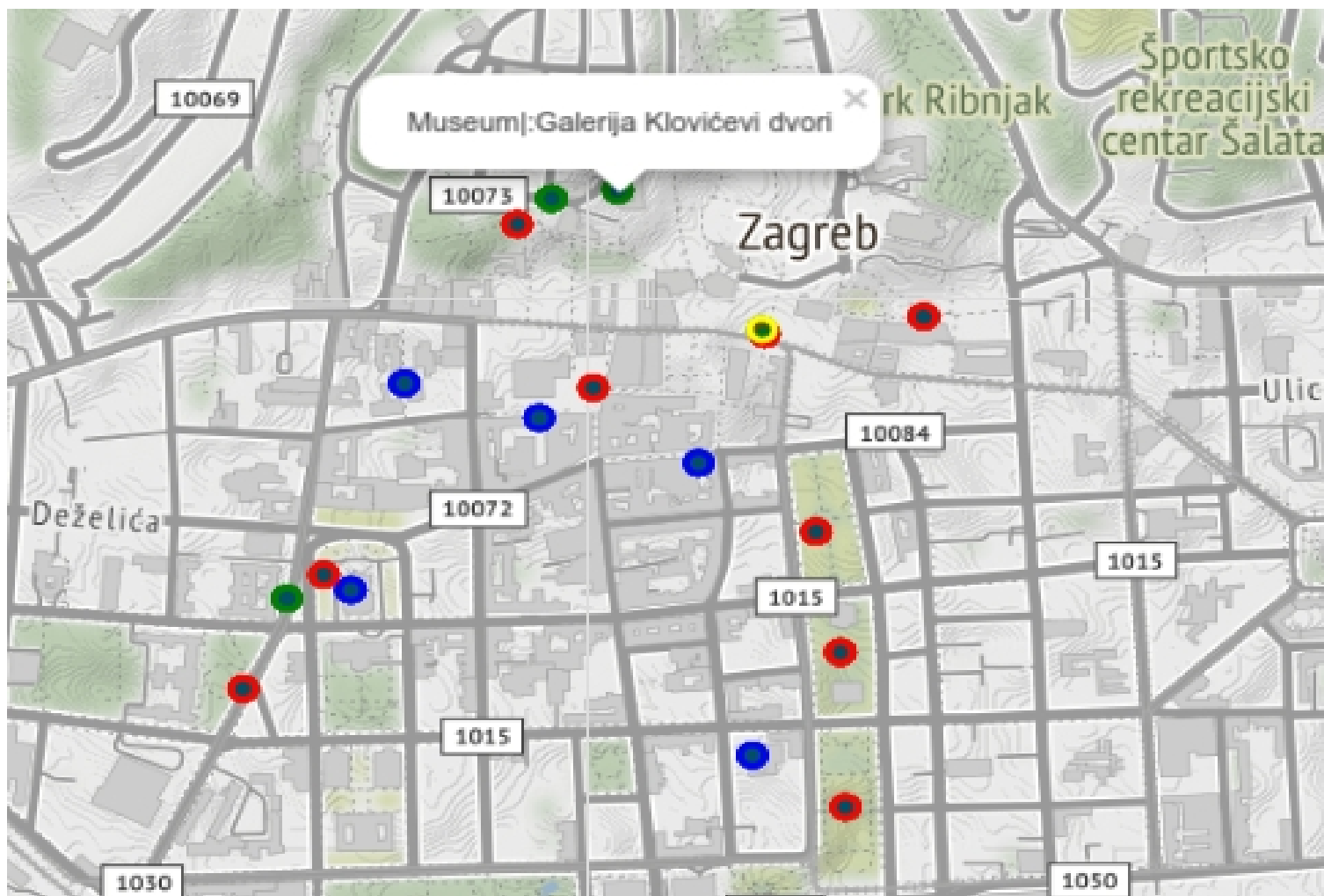
	District	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
41	Donji Grad	45.808333	15.976111	Trg Nikole Šubića Zrinskog   Zrinjevac	45.810244	15.978109	Plaza
42	Donji Grad	45.808333	15.976111	Trg kralja Tomislava	45.806442	15.978627	Plaza
59	Donji Grad	45.808333	15.976111	Strossmayerov trg	45.808578	15.978560	Plaza
62	Donji Grad	45.808333	15.976111	Cvjetni trg	45.812251	15.974208	Plaza
69	Donji Grad	45.808333	15.976111	Trg bana Josipa Jelačića	45.813019	15.977229	Plaza
103	Donji Grad	45.808333	15.976111	Trg Europe	45.813235	15.979996	Plaza

	District	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
54	Donji Grad	45.808333	15.976111	Zagrebačko kazalište mladih (ZKM)	45.811199	15.976042	Theater
60	Donji Grad	45.808333	15.976111	Hrvatsko narodno kazalište u Zagrebu (HNK)	45.809444	15.969960	Theater
77	Donji Grad	45.808333	15.976111	Zagrebačko kazalište lutaka (ZKL)	45.807140	15.977001	Theater
86	Donji Grad	45.808333	15.976111	Kino Europa	45.811830	15.973250	Indie Movie Theater
112	Donji Grad	45.808333	15.976111	Kazalište Kerempuh	45.812323	15.970908	Theater

	District	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
107	Donji Grad	45.808333	15.976111	Muzej za umjetnost i obrt (MUO)	45.809333	15.968855	Art Museum
126	Donji Grad	45.808333	15.976111	Galerija Klovićevi dvori	45.815022	15.974649	Museum
139	Donji Grad	45.808333	15.976111	Muzej prekinutih veza   Museum of Broken Relat...	45.814900	15.973476	Museum

	District	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
88	Donji Grad	45.808333	15.976111	Ban Jelacic square	45.81308	15.977171	Historic Site

# Map of venues of interest





# Accommodation

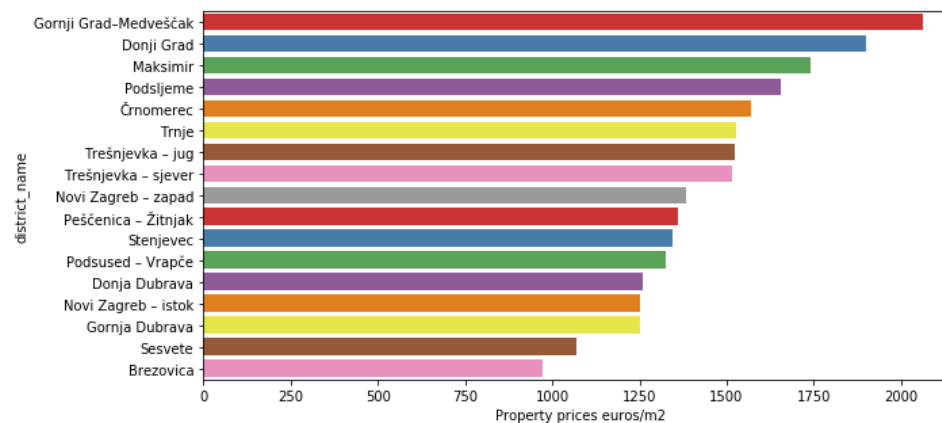
In 2010 more than 600,000 tourists visited the city, with a 10% increase seen in 2011. In 2012 a total of 675 707 tourists visited the city. The record number of tourists visited Zagreb in 2017. – 1.286.087, up 16% compared to the year before, which generated 2.263.758 overnight stays, up 14,8%.

Donji Grad again comes up at the top, with 15 hostels, 14 hotels and 752 privately owned places!

# Property prices

[52]:

	district_name	house_prices
5	Gornji Grad–Medveščak	2062
3	Donji Grad	1901
6	Maksimir	1740
10	Podsljeme	1654
1	Črnomerec	1569
16	Trnje	1528
14	Trešnjevka – jug	1523
15	Trešnjevka – sjever	1517
8	Novi Zagreb – zapad	1382
9	Peščenica – Žitnjak	1362
13	Stenjevec	1346
11	Podsused – Vrapče	1326
2	Donja Dubrava	1259
7	Novi Zagreb – istok	1253
4	Gornja Dubrava	1250
12	Sesvete	1069
0	Brezovica	973





# Conclusion: Donji Grad

Highest population density: 12 341

Decent number of population: 37 024

Lower unemployment rate for women: 547 women unemployed

Highest number of unique venue categories: 100

It is surrounded by museums, theaters, galleries and historic sites.

15 hostels, 14 hotels and 752 privately owned places.

Only downside is rather HIGH RATE OF PRICES FOR PROPERTIES.



# Future directions:

- Explore other districts from the same cluster
- Obtain better and larger dataset
- Explore districts from closest cluster, and one with most potential seems to be Trnje. It borders with Donji Grad, and have 2nd number of unique venue categories.