

PERFECT CITY FOR OPENING A
CAFE BAR

INTRODUCTION

- Helping to define where to open a cafe bar in Europe.
- Defining which city center is the best for opening a cafe bar from all the biggest European cities.
- Examining all the venues in the centers of each of the city from the list.

IMPORTING THE DATA

- We used a list of biggest European cities from wikipedia ([„https://en.wikipedia.org/wiki/List_of_European_cities_by_population_within_city_limits”](https://en.wikipedia.org/wiki/List_of_European_cities_by_population_within_city_limits)).
- We cleared the unnecessary data and imported the city location.

	Rank	City	Country	Population	latitude	longitude
0	1	Istanbul	Turkey	15519267	41.009633	28.965165
1	2	Moscow	Russia	12615279	55.479205	37.327330
2	3	London	United Kingdom	9126366	51.507322	-0.127647
3	4	Saint Petersburg	Russia	5383890	59.960674	30.158655
4	5	Berlin	Germany	3748148	52.517037	13.388860
5	6	Madrid	Spain	3223334	40.416705	-3.703582
6	7	Kiev	Ukraine	2950800	50.450034	30.524136
7	8	Rome	Italy	2844750	41.893320	12.482932
8	9	Paris	France	2140526	48.856697	2.351462
9	10	Bucharest	Romania	2106144	44.436141	26.102720

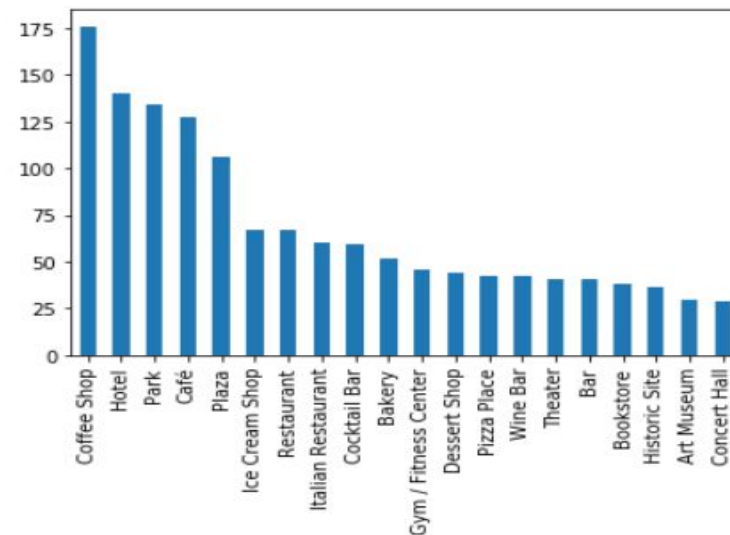
LIST OF VENUES

- Using the Foursquare API, we imported the venues from the center from every city on the list.

	City	City Latitude	City Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Istanbul	41.009633	28.965165	Bayezid Camii	41.009736	28.964500	Mosque
1	Istanbul	41.009633	28.965165	Day Day Pastanesi	41.009440	28.968023	Bakery
2	Istanbul	41.009633	28.965165	Kapalıçarşı	41.009725	28.968315	Historic Site
3	Istanbul	41.009633	28.965165	Nuruosmaniye Camii	41.010151	28.970701	Mosque
4	Istanbul	41.009633	28.965165	Cevahir Bedesteni (Oldbazaar)	41.010894	28.969446	Antique Shop
...
3061	Odessa	46.487319	30.739278	Детская площадка у "Немо"	46.477106	30.764376	Playground
3062	Odessa	46.487319	30.739278	Wine Story - Винфорт	46.463149	30.741597	Wine Shop
3063	Odessa	46.487319	30.739278	Make My Cake Cafe	46.463345	30.754717	Dessert Shop
3064	Odessa	46.487319	30.739278	Дельфинарий Немо / Nemo Dolphinarium (Дельфіна...)	46.476975	30.765269	Aquarium
3065	Odessa	46.487319	30.739278	Одесса, пляж Аркадія, Центральна Аллея	46.473283	30.764131	Beach

SHOWING THE MOST COMMON VENUES ACROSS ALL THE CITIES

- We can see that coffee shops are the most common content in all the cities in the list.



CLUSTERING

- We clustered cities based on the most common venues in two different groups.
- First you'll see a map where cities that belong to different clusters are marked with different colors.
- Then you'll see the lists with all the informations about cities in different groups with the list of most common venues.

TWO CLUSTERED GROUPS

RED

TURQUOISE

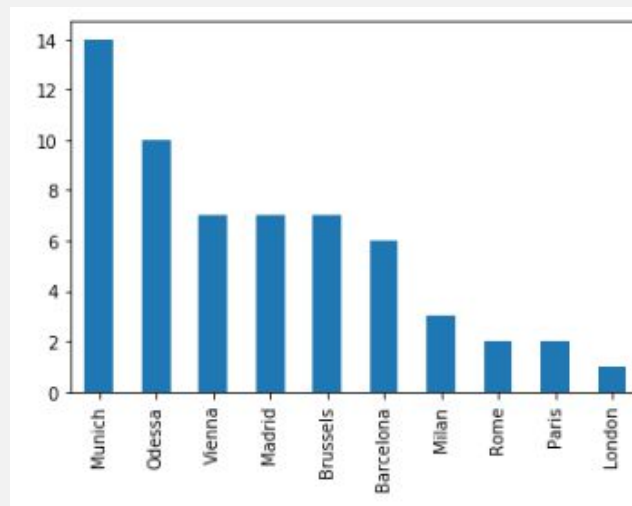
	City	Population	latitude	longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Istanbul	15519257	41.009633	28.955165	0	Café	Historic Site	Coffee Shop	Hotel	History Museum
1	Moscow	12515279	55.479205	37.327330	0	Park	Supermarket	Café	Restaurant	Convenience Store
3	Saint Petersburg	5383890	59.950874	30.158855	0	Bakery	Salon / Barbershop	Park	Hookah Bar	Beach
4	Berlin	3748148	52.517037	13.388860	0	Coffee Shop	Park	Bookstore	Ice Cream Shop	Concert Hall
6	Kiev	2950800	50.450034	30.524136	0	Coffee Shop	Park	Tatar Restaurant	Wine Bar	Dessert Shop
9	Bucharest	2108144	44.436141	26.102720	0	Coffee Shop	Dessert Shop	Burger Joint	Park	Hotel
10	Minsk	1982444	53.902334	27.561879	0	Coffee Shop	Bar	Restaurant	Cocktail Bar	Park
11	Hamburg	1930998	53.543764	10.009913	0	Café	Park	Coffee Shop	Pizza Place	Ice Cream Shop
13	Warsaw	1802237	52.233717	21.071411	0	Café	Park	Dessert Shop	Sushi Restaurant	Cocktail Bar
14	Budapest	1768073	47.498382	19.040471	0	Coffee Shop	Bakery	Hotel	Ice Cream Shop	Park
17	Kharkiv	1451132	49.990279	36.230389	0	Coffee Shop	Gym / Fitness Center	Park	Yoga Studio	Italian Restaurant
19	Prague	1308632	50.087455	14.421254	0	Café	Park	Burger Joint	Ice Cream Shop	Cocktail Bar
20	Nizhny Novgorod	1259013	56.328571	44.003505	0	Coffee Shop	Café	Hotel	Scenic Lookout	Hookah Bar
21	Kazan	1243500	55.782355	49.124227	0	Coffee Shop	Boutique	Park	Restaurant	Hotel
23	Birmingham	1223000	52.479699	-1.902891	0	Pub	Bar	Indian Restaurant	Coffee Shop	Hotel
25	Samara	1170910	53.198627	50.113987	0	Coffee Shop	Beach	Pedestrian Plaza	Hotel	Café
26	Belgrade	1166763	44.817813	20.456897	0	Park	Coffee Shop	Ice Cream Shop	Cocktail Bar	Bar
27	Ufa	1121429	52.387061	13.122812	0	German Restaurant	Supermarket	Café	Park	Historic Site
28	Rostov-on-Don	1119875	47.221385	39.711420	0	Restaurant	Hotel	Café	Park	Coffee Shop
29	Cologne	1085684	50.938361	6.959974	0	Café	Park	Coffee Shop	Italian Restaurant	Ice Cream Shop

	City	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
2	London	9126366	51.507322	-0.127647	2	Hotel	Cocktail Bar	Theater	Clothing Store	Hotel Bar
5	Madrid	3223334	40.416705	-3.703582	2	Plaza	Hotel	Restaurant	Tapas Restaurant	Spanish Restaurant
7	Rome	2844750	41.893320	12.482932	2	Ice Cream Shop	Pizza Place	Italian Restaurant	Plaza	Sandwich Place
8	Paris	2140526	48.856697	2.351462	2	Plaza	Wine Bar	French Restaurant	Bookstore	Italian Restaurant
12	Vienna	1899055	48.208354	16.372504	2	Hotel	Plaza	Ice Cream Shop	Austrian Restaurant	Park
15	Barcelona	1636762	41.382894	2.177432	2	Hotel	Park	Plaza	Wine Bar	Bakery
16	Munich	1471508	48.137108	11.575382	2	Café	Plaza	Ice Cream Shop	Beach	Hotel
18	Milan	1389834	45.466800	9.190500	2	Hotel	Boutique	Monument / Landmark	Plaza	Park
24	Brussels	1211035	50.846557	4.351697	2	Bar	Hotel	Concert Hall	Coffee Shop	Plaza
34	Odessa	1011494	46.487319	30.739278	2	Hotel	Coffee Shop	Plaza	Park	Café

FINAL EXAMINATION

- For further examination, we used the Turquoise group.
- Now we have a list and a chart for the cities where cafe bars are the rarest in the center of the city.

	City
Munich	14
Odessa	10
Vienna	7
Madrid	7
Brussels	7
Barcelona	6
Milan	3
Rome	2
Paris	2
London	1



CONCLUSION

- Based on the research, London, England has got a smallest amount of cafe bars in the city center.
- London is the best option.