Capstone Project - Restaurant in Belgrade

Introduction/Business Problem

As there so many restaurants in Belgrade risk for opening new restaurant is getting bigger. That's why using data science and location data of other restaurants we can reduce that risk and help small business owners to open new restaurants.

The main idea is to calculate the best location for opening a specific restaurant so the impact of competition is the lowest and restaurants have the best chance to profit.

Data

Using Foursquare API we will gather all required data we need for finding the best location for the new restaurant.

The Foursquare Places API provides location-based experiences with diverse information about venues, users, photos, and check-ins. The API supports real-time access to places, Snap-to-Place that assigns users to specific locations, and Geo-tag.

For our project, we will gather the name of the restaurant, address, and geographical coordinates and that data will be used for analysis.
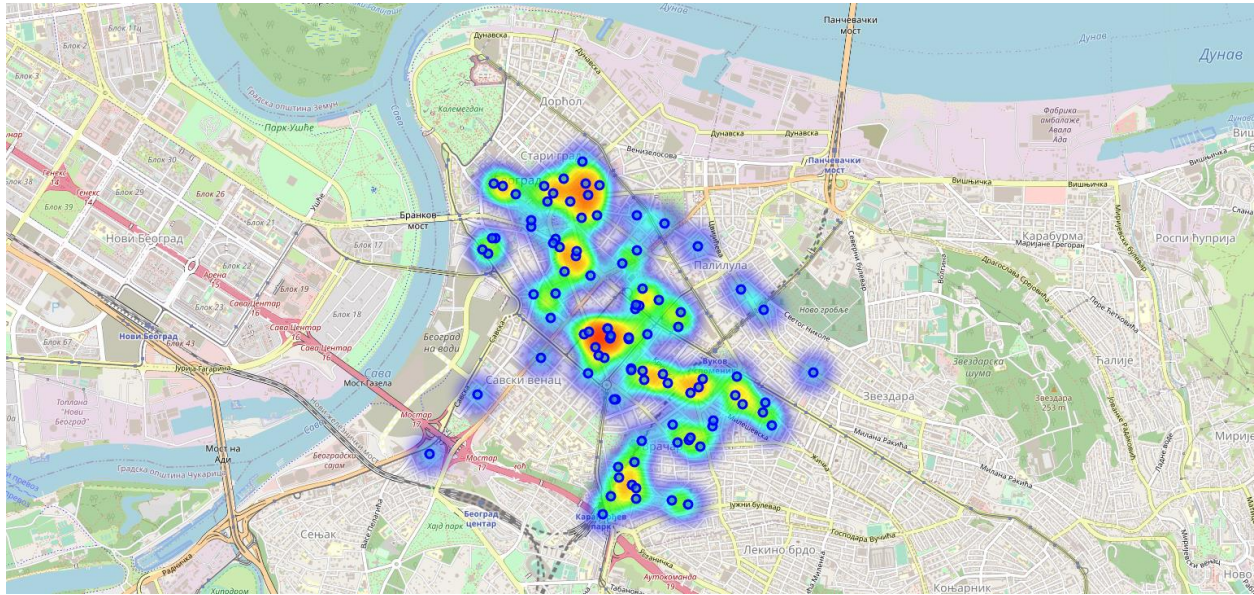
Analysis

After gathering data using Foursquare API we start to group data so we can easily manipulate and visualize gathered data.

Next step was retrieving restaurants from whole dataset so we can see distribution of restaurants in Belgrade.

In picture below you can see part of gathered data.

	uid	name	shortname	address	lat	lng
0	5900d198f96b2c2191cb57e0	Hilton	Hotel	[Kralja Milana 35 (Kralja Milutina), 11000 Бео...	44.804509	20.466071
1	598ee2aa2955134db1635b30	LUFF	Ice Cream	[Prote Mateje 30 (Njegoseva), 11000 Belgrade, ...	44.803711	20.468922
2	4b62f063f964a520c4592ae3	Jugoslovensko dramsko pozorište	Theater	[Kralja Milana 50, 11000 Београд, Србија]	44.805276	20.465168
3	4fe8a5bee4b0899a0b1f0704	Kultura	Cocktail	[Kralja Milutina 4 (Krunska), 11000 Београд, С...	44.805905	20.468605
4	5c781d0a5bc27d0025ea8ccb	Crna ovca	Ice Cream	[Njegoševa 45 (Smiljaniceva), 11000 Београд, С...	44.802860	20.470260
5	58614647158b9642d61f33a8	Street Pasta Bar	Italian	[Kralja Milana 52 (Svetozara Markovića), 11040...	44.804687	20.465452
6	5380a315498e3241cb37b1a0	Salon de Thé by Small Tree	Tea Room	[Svetog Save 12, 11000 Београд, Србија]	44.801386	20.467304
7	4cd2e8713e0c8cfa4d9f1a12	Delfi	Knjižara SKC	Bookstore	[Kralja Milana 48 (ulaz iz Resavske), 11040 Бе...	44.806279	20.463949
8	595a88a41c0b3450c96051b3	Astal	Arcade	[Kralja Milana 27 (Resavska), 11000 Београд, С...	44.806428	20.464426
9	4d4ab5a383eda1cd6047b5b1	Trpković	Bakery	[Nemanjina 32, 11000 Београд, Србија]	44.803343	20.464343

After that we proceed with visualization of gathered data, and map of Belgrade down town is shown below.

Results

With map we easily see what part of city is crowded with restaurants and with that in mind it easier for new business owner to choose location for new restaurant.