

Opening an Italian restaurant

I. Introduction - Business problem

The project describes the process of searching the best district to open an Italian restaurant in Ljubljana.

It is very important for new restaurant owners to decide which type of restaurant they will open. This research will also help them to decide which district is most promising to open a new restaurant.

As a city with many sights, Ljubljana is a target of many tourists and because of that we will define the country of the most numerous tourists. We assume that the most numerous tourists will visit the restaurant which offer dishes from the country they are coming from. Beside that we will show where the most important sights and monuments are located and which district is most attracted by tourists. It is generally known that there is a strong link between tourists and sights, so district with the largest number of sights will be the most interesting for tourists. We assume that that Italians are the most numerous tourists in Ljubljana and because of that the logical choice is to open an Italian restaurant.

At the end of the project we will confirm the assumption.

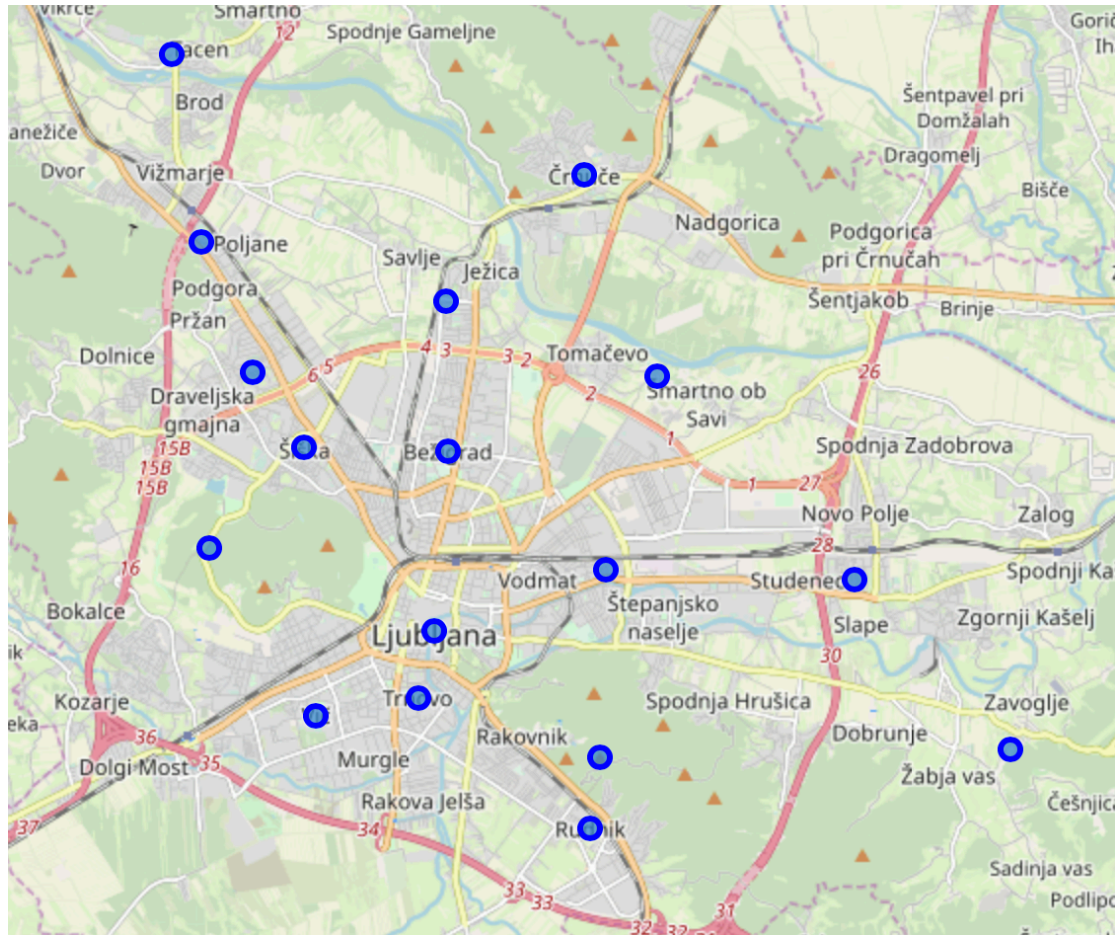
II. Data description

Based on definition of our problem, factors that will influence our decision are:

- list of districts in Ljubljana,
- number of the most numerous tourists in Ljubljana,
- location of the most important sights in Ljubljana,
- number of restaurants which offer dishes from the country as the most numerous tourists are coming from (example: if the most numerous tourists are Italians, we will query Italian restaurants),
- list of chosen type of restaurants situated in the city districts.

Following data sources will be needed to extract/generate the required information:

- centers of candidate districts will be generated using OpenStreetMap (Nominatim) API.
- list of restaurants and their type and location in every districts will be obtained using Foursquare API,
- coordinate of Ljubljana center will be obtained using Nominatim geocoding,
- list of Ljubljana districts will be web scraped using BeautifulSoup,
- list of Ljubljana sights and list of Ljubljana visitors/tourists will be obtained by pre prepared statistical files.



From the web site https://sl.wikipedia.org/wiki/Četrtna_skupnost_Ljubljane we will extract information about Ljubljana districts.

| | Districts | Latitude | Longitude |
|---|-----------|-----------|-----------|
| 0 | Bežigrad | 46.071523 | 14.509137 |
| 1 | Center | 46.049815 | 14.506782 |
| 2 | Črnuče | 46.105006 | 14.532862 |
| 3 | Dravljje | 46.081140 | 14.475201 |
| 4 | Golovec | 46.034705 | 14.535686 |

With Nomination OpenStreetMap we will search for geographic coordinates of each district in Ljubljana.

We will be utilizing the Foursquare API to pull the following location data on Italian restaurants in Ljubljana:

- Venue Name,
- Venue Location,
- Venue Category.

| Venue | District | Venue Latitude | Venue Longitude | Venue Category |
|------------------|----------|----------------|-----------------|--------------------------|
| Alegria | Bežigrad | 46.066030 | 14.514992 | Italian Restaurant |
| Apertivo | Center | 46.051403 | 14.504608 | Italian Restaurant |
| As Aperitivo | Center | 46.051400 | 14.504730 | Mediterranean Restaurant |
| Bežigrajski dvor | Bežigrad | 46.065758 | 14.510303 | Pizza Place |

The touristic sights in Ljubljana will be pulled from web site
<http://www.onbria.com/wp-content/uploads/2019/03/Ljubljana.csv> .

| | Place | Lat | Long |
|----------|------------------|------------|-------------|
| 0 | Ljubljana Castle | 46.049021 | 14.508629 |
| 1 | Triple Bridge | 46.051198 | 14.506200 |
| 2 | Tivoli City park | 46.052333 | 14.491331 |
| 3 | Dragon Bridge | 46.052134 | 14.510351 |
| 4 | Presern monument | 46.051416 | 14.506177 |

On <http://www.onbria.com/wp-content/uploads/2019/04/Tourists.csv> we can check the statistical information on tourist arrivals and overnight stays in Ljubljana from 2008 till 2017.

| | Country | Arrivals | Overnights |
|----------|----------------|-----------------|-------------------|
| 0 | Italy | 615752 | 1016681 |
| 1 | Germany | 393852 | 715091 |
| 2 | United Kingdom | 293308 | 623496 |
| 3 | United States | 248841 | 538523 |
| 4 | Slovenia | 272515 | 445841 |