

Switzerland's secrets

Business Problem

Switzerland is a small country in Central Europe, famous for watches, chocolate and as tax haven. Switzerland also features breathtaking landscapes – a great portion of the country lies in the alps – and tourism is an important economy.

As a tourist, you may want to get an idea which regions would be interesting to visit and what kind of venues you would come across there. Where to go for skiing and hiking, are there hotels, restaurants, other types of recreation? Where will you be in the crowds and where can you expect untouched nature?

As someone who plans to go live and work in Switzerland, you may be interested in getting an impression of where the Swiss live and work, where GDP is higher or lower and what venues to expect there.

Data

Four different datasets are combined in this analysis:

- Swiss location data
- Population density
- GDP
- Foursquare location data

Firstly, Switzerland will be divided into regions. Luckily, the Swiss did the job already, they subdivided their country into 26 regions (cantons).

Swiss location data will be downloaded from GADM.org, level 1 providing the canton border data. This data is going to be the basis for the maps to be drawn. GADM location data can be downloaded as GeoJSON file and can be directly used with folium to draw maps.

In this work, Swiss location data will be combined with Population density and GDP data for each canton into two different choropleth maps of the country.

GDP and population density data will be downloaded from the Swiss Federal Statistical Office in xlsx format. The dataset will be cleaned and readied for drawing the needed maps. That not only means to remove empty cells, columns and lines from the original dataset, but also to add the appropriate key for drawing the choropleth maps.

Secondly, Foursquare location data will be used to characterize and group the 26 cantons. The grouping will again be combined with each of the two choropleth maps. Every group of cantons will be characterized by the top 10 venues found there.

Switzerland's area covers 41285 km². As stated above, the country is divided into 26 cantons, giving an average area of 1588 km² per canton. Assuming a circle, the radius was 22.5 km per canton. In real, the cantons have different sizes, and there are small and very large cantons. Therefore, the radius used in the Foursquare API will be 40 km, accepting some overlap in some areas in favor of creating too many gaps.