

# Capstone Project: Thai Restaurant in Switzerland

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JUNE, 2020



## Opening a Thai restaurant in Switzerland: what are the places in the country that would make sense from a business perspective

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- ❑ restaurant should be in a densely populated region with strong economic activity and relatively high income
- ❑ restaurant should not be too close to already existing Thai restaurants
- ❑ it would be interesting to know whether there are still some well populated areas in Switzerland still with no Thai restaurant around.

## Data acquisition

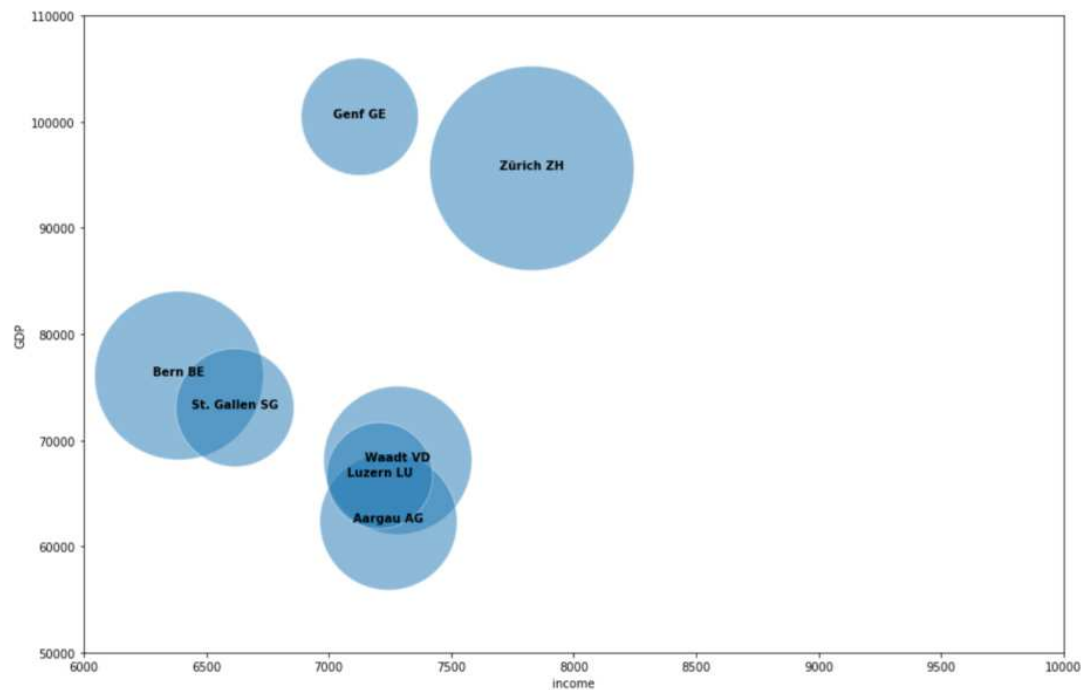
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- GDP per capita, from the Swiss Federal Office of Statistics (by cantons):  
<https://www.bfs.admin.ch/bfs/de/home/statistiken/volkswirtschaft/volkswirtschaftliche-gesamtrechnung/bruttoinlandprodukt-kanton.assetdetail.10647589.html>
- Income per capita, from the Swiss Federal Office of Statistics (by cantons):  
<https://www.bfs.admin.ch/bfs/de/home/statistiken/wirtschaftliche-soziale-situation-bevoelkerung/einkommen-verbrauch-vermoegen/haushaltsbudget.assetdetail.10867286.html>
- Data about population in the various municipalities in Switzerland, with number of inhabitants per municipality. This information can be obtained from this site:  
<https://opendata.swiss/de/group/population>

Additionally, the following will be used with Python in order to support the project:

- *Nominatim Geopy* module to locate the coordinates of municipalities.
- *Foursquare* data to identify already existing Thai restaurants in Switzerland and their respective location.

Narrowing the scope of search: places within the 7 most populous cantons of Switzerland, which all have significant populations and also income/GDP (per person, shown in this analysis in Swiss Francs) that certainly could justify the investment



	canton	population	GDP	income
0	Zürich ZH	1520968	95607.83790	7829.343369
1	Bern BE	1035068	76084.92353	6388.811173
2	Waadt VD	799145	68102.12356	7282.004982
3	Aargau AG	686508	62336.51043	7244.318060
4	St. Gallen SG	507697	73058.67656	6617.487930
5	Genf GE	499480	100464.27650	7127.030646
6	Luzern LU	409935	66655.23951	7208.037811

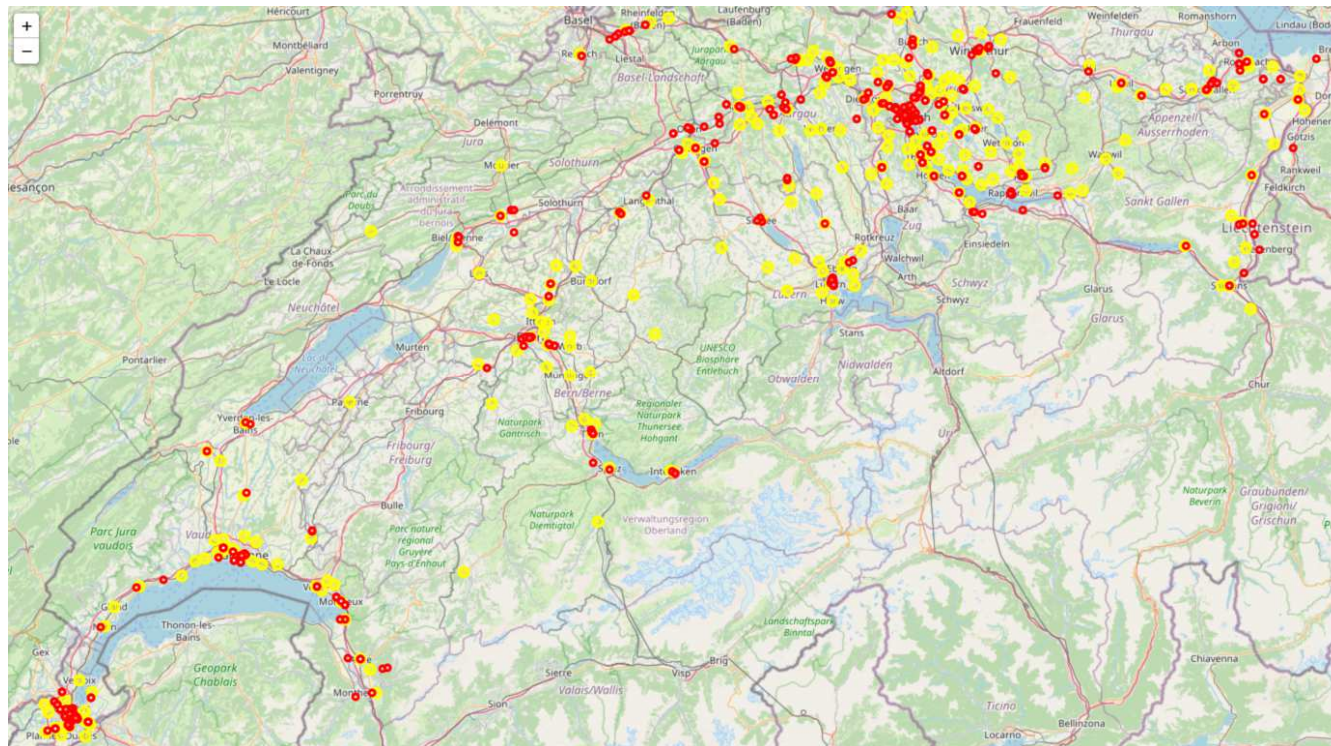
X=income p.p., Swiss Francs,  
Y=GDP p.p., Swiss Francs,  
Bubble Size = proportional to population  
size with details on table further down)

Narrowing the scope of search: municipalities with population greater than 5'000 people

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Classification of Municipality	Numbers of Thai restaurants within 5 km	Number of Municipalities
0	0	41
A	1 – 3	105
B	4 – 7	69
C	8 – 10	16
D	11 – 25	12
E	26+	8

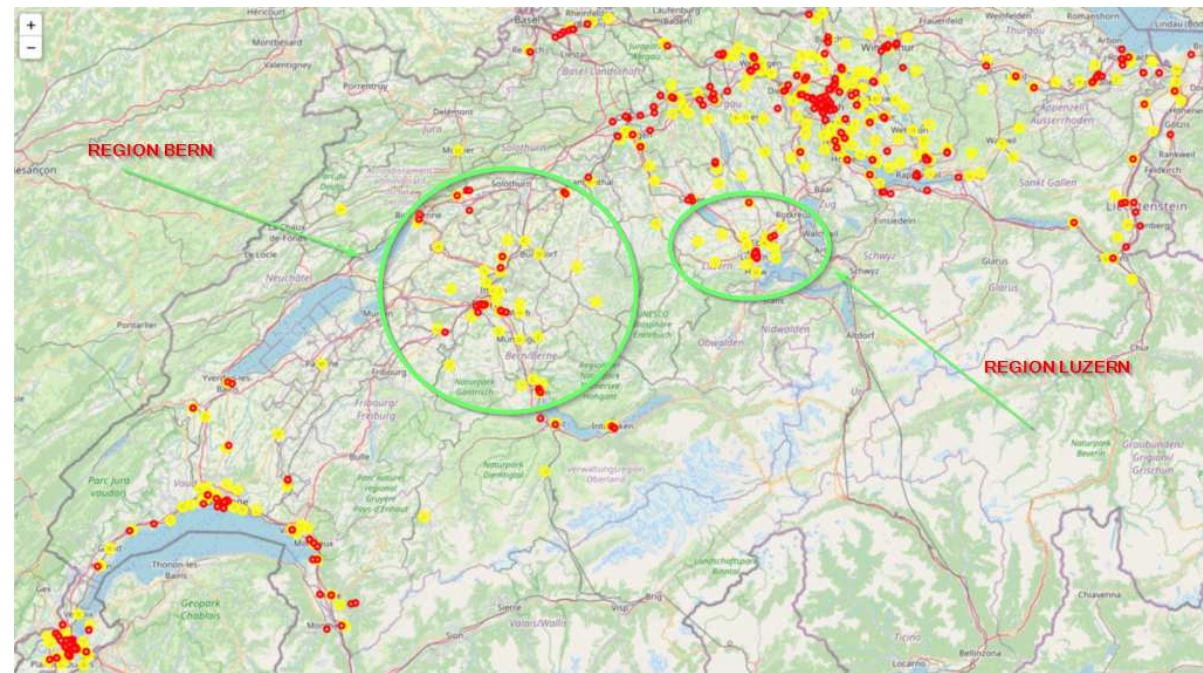
On the map: it is clear that there are some regions with very high concentration of Thai restaurants and others, with relatively large municipalities but not that many Thai restaurants nearby



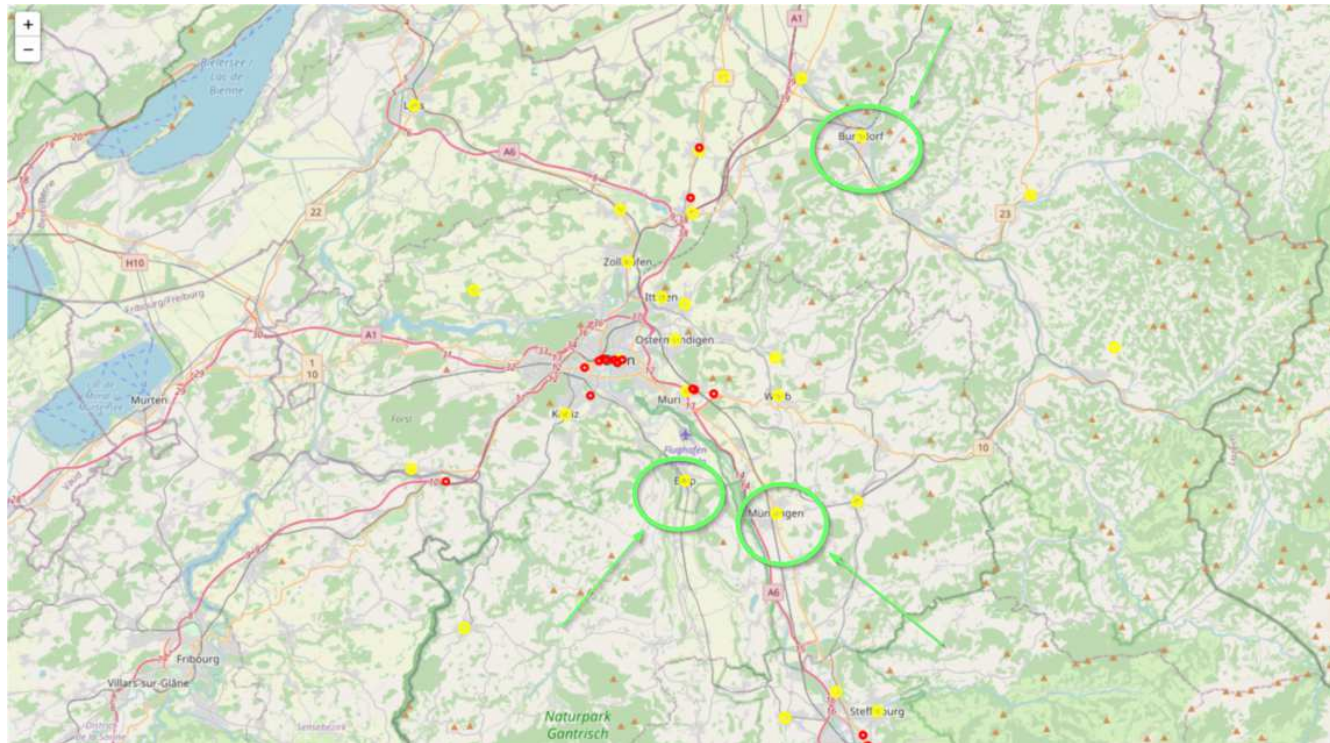
- yellow dots represent the 251 pre-selected municipalities
- Red dots represent all Thai restaurants within 5 km of municipalities



Areas around Bern and/or Luzern: there is a concentration of relatively large municipalities with not that many Thai restaurants nearby



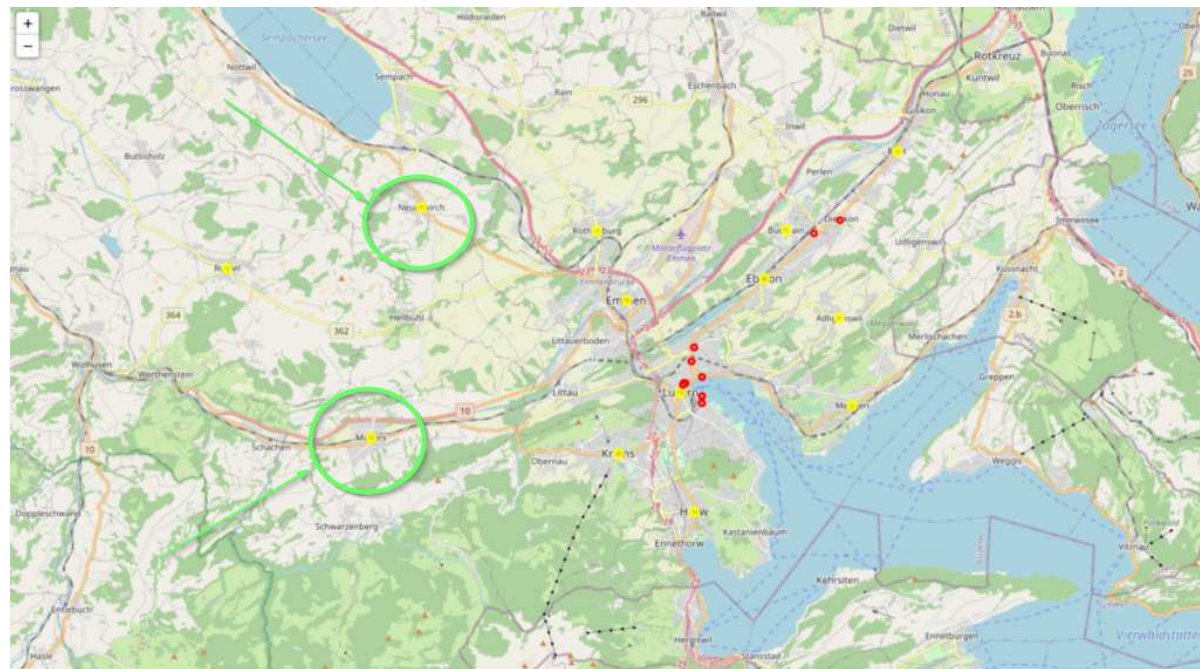
Region of Bern – candidates for a new Thai restaurant are e.g. the municipalities of Belp, Münsingen and Burgdorf





Region of Luzern – candidates for a new Thai restaurant are e.g. the municipalities of Malers and Neunkirch

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## Conclusion

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- The use of data analysis to identify possibilities for a new business location has proved to be possible, thanks to the amount of data available in the internet and tools (IBM Watson Studio, libraries, API's such as Foursquare, etc).
  - Nevertheless it still requires a lot of time to prepare and model data. Additionally it is still fundamental to acquire understanding of the business and the problem one is trying to solve in order to achieve good results.
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