1. Introduction

Background

Year 2020 has started with the threat of worldwide pandemic under the name COVID-19. Over the first weeks of January and February virus has been spreading all around the world. In the first days of March Switzerland became an effected country with the exponential growth of the infections. Due to that fact, many governmental measures have been implemented where one of them was to close temporarily all leisure places such as restaurants, pubs, clubs, theaters and cinemas.
Since the end of May, after more than two months of country lockdown, Swiss government has decided re-open many places again under security instructions such as keeping distance between people, tables and oblige guests to use disinfectants and giving their contact details in case COVID-19 will be detected in the person sitting next to you or the person will be infected itself.

Business Problem

Many Swiss cities have centralized urbanistic plan of the city and lake/river oriented. It means that majority of cultural/entertainment areas are placed next to each other. It gives higher opportunity for meeting of healthy and infected people what can have an impact on the first ones. In my analysis I would like to understand:

- Which places (district) in the biggest Swiss city, Zürich have this huge concertation factor
- What are alternatives in other districts where distribution is more flattened

2. Data preparation

Data model

For my questions, I need to have data describing Zürich coordinates in general:

- City (Zürich)
- Zip Code (example: 8001)
- Longitude (example: 8.53)
- Latitude (example: 47.38)

Where I will be able to compare them with Foursquare information such as:

- Food
- Coffee
- Shopping
- Breakfast
- Longitude
- Latitude
- City

Data cleaning

To prepare a general data about Zürich, I have downloaded the information about Zürich Zip Codes from https://realadvisor.ch/en/property-prices/city-zurich and coordinates from https://rueegger.me/blog/schweizer-postleitzahlen-mit-koordinaten/

3. Methodology

As the exploratory analysis I have brought postal codes in the districts due to the fact that it is the way how Zürich is divided. As the second step, I have analyzed where are the biggest amount of people living and where people spend time in Zürich. It brought me to taking into consideration just 4 main districts:

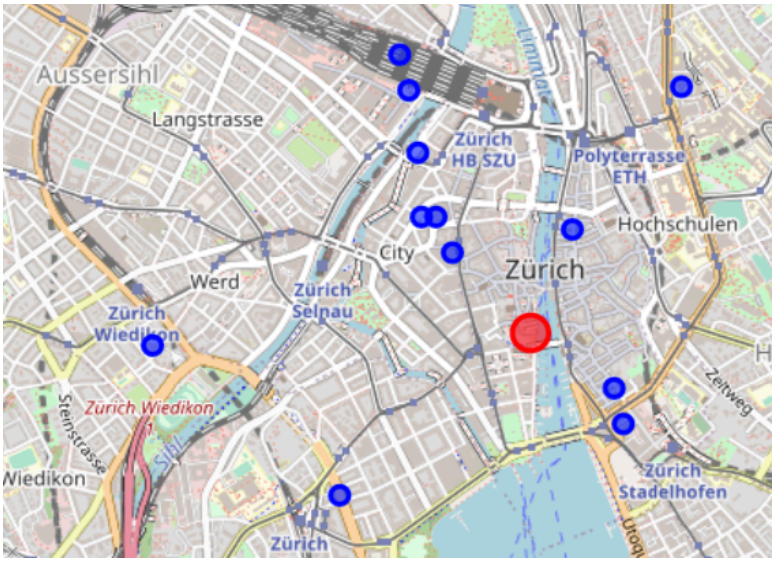
- District 1
- District 2
- District 3
- District 4

I have used them for preparing the analysis and results to my questions.

4. Results

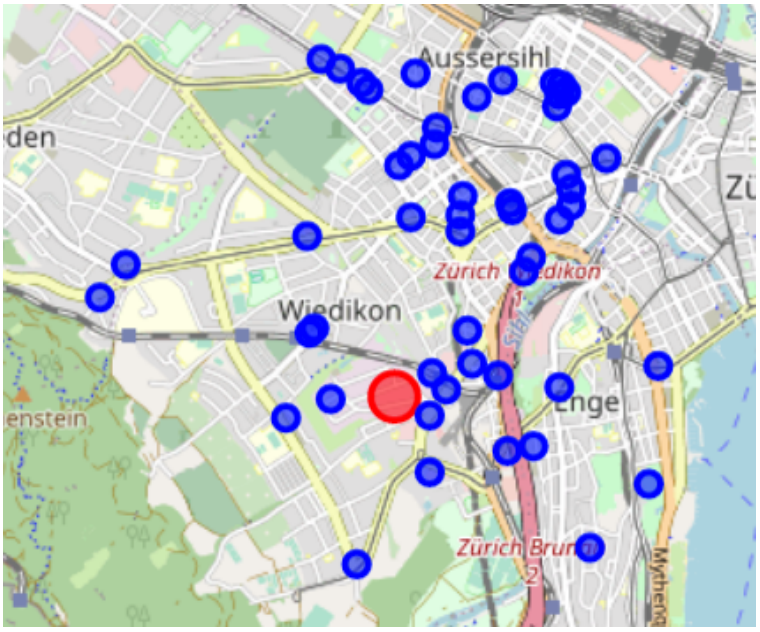
First of all, I have deployed the code for every district one by one to understand which of them has the biggest concentration factor as it was stated in my first question. Here are the results:

District 1



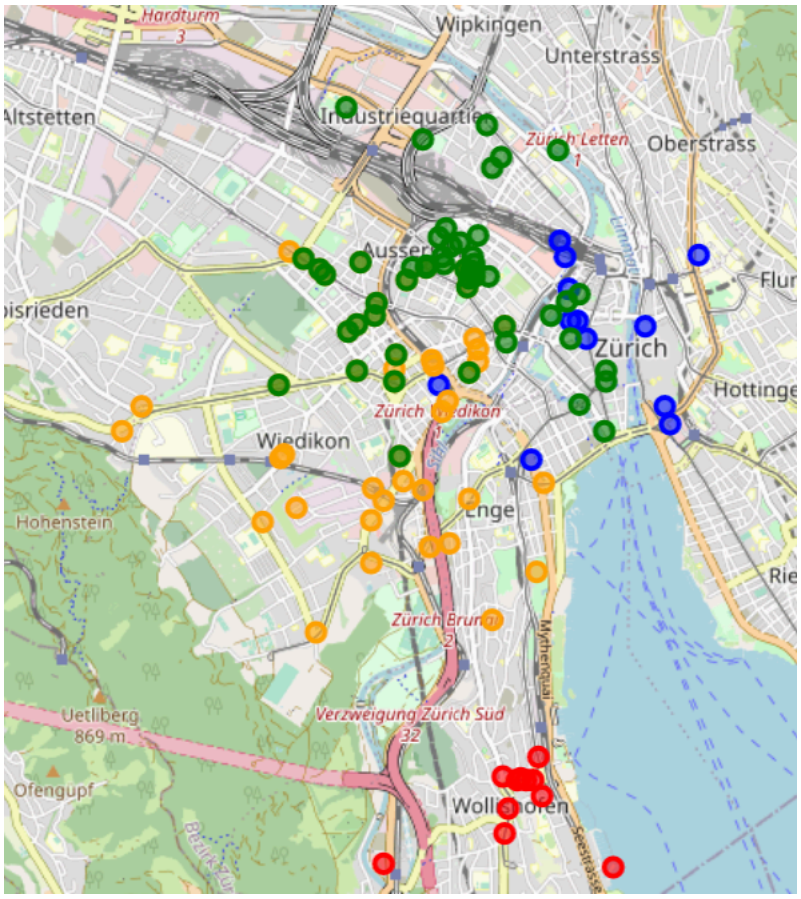
District 2

District 3



District 4

Comparison



5. Discussion

After some data constraints connected to District 1 and deliberation, it seems to me that the biggest concentration of leisure places has District 4. Many companies have their offices there and District 4 is seen as nightlife place of Zürich as well.

For the second question which was: What are alternatives in other districts where distribution is more flattened, it seems to me that district 3 has the most friendly and safe distribution of leisure places which allow the situation that many people will not meet at the same time.

6. Conclusion

In my opinion the exercise I have performed was very valid nowadays. As I can prove with my own experience the distribution of leisure places in Zürich, statistical data based on the model I created confirm reality.