

Where should I live in Zurich?

Data Science Capstone Project

Problem

- When moving to a new city it is always difficult to find an attractive neighbourhood?
- How can we use Foursquare data, census data and machine learning to determine the most attractive neighbourhoods in Zurich?

Background / Assumption

- This analysis presumes that young people like to live in lively urban neighbourhoods with many bars, restaurants, etc.
- For families, elderly people and other target groups other results might apply.

Data

The present analyses used three data sources:

- Foursquare data → determine the attractiveness of neighbourhoods based on most common venues
- Neighbourhood level census data → identify «work neighbourhoods» and «living neighbourhoods»
- GeoHack Location Data → retrieve geo locations for Zurich's 34 neighbourhoods from GeoHack

Methodology

Step 1: Compile new data set with census and location data of Zurich's neighbourhoods

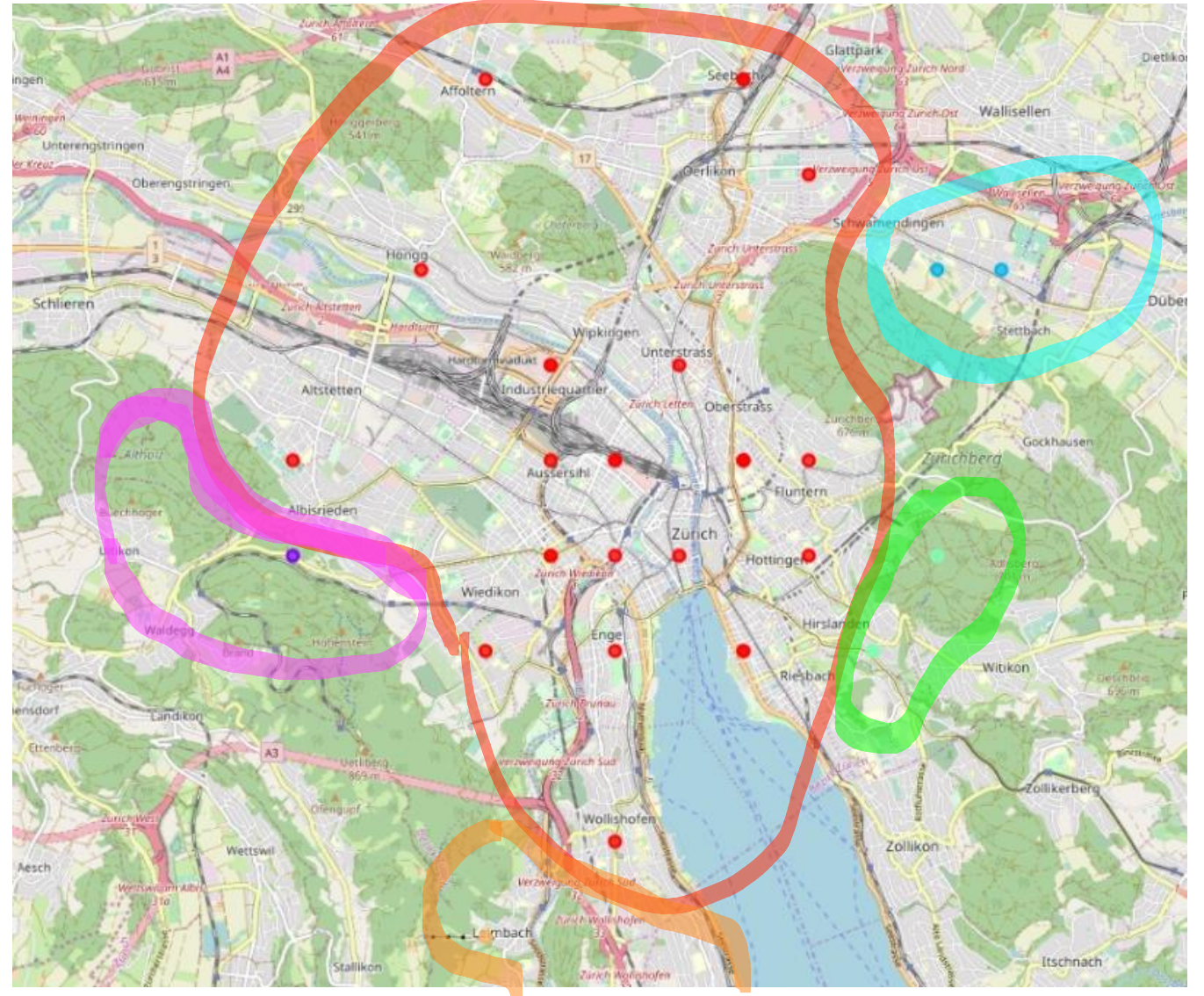
Step 2: Compute workplace-population-ratio (measure for type of neighbourhood)

Step 3: Match Foursquare venue data to each neighbourhood

Step 4: Run k-means cluster algorithm to group similar neighbourhoods

Step 5: Identify most attractive neighbourhoods

Results (I/II)



Results

(II/II)

Five neighbourhood clusters in Zurich were identified:

1. Urban neighbourhoods (red cluster)
2. Outskirt, North-East (blue cluster)
3. Outskirt, South-East (green cluster)
4. Outskirt, West (purple cluster)
5. Outskirt, South (orange cluster)

Discussion (I/II)

As the target audience for this project are young adults who want to move to Zurich, it is assumed that the urban neighbourhood cluster is most attractive.

BUT, which of the urban neighbourhoods is most attractive?

Discussion (II/II)

Cluster	Neighbourhood (Quarter)	Workplace Density	Population Density	Workplace-Population-Ratio
Cluster 1 (red) Urban Neighbourhoods	Saatlen	209	7824	0.03
	Affoltern	151	4422	0.03
	Friesenberg	79	2157	0.04
	Höngg	161	3490	0.05
	Seebach	329	5467	0.06
	Wollishofen	203	3343	0.06
	Wipkingen	547	7808	0.07
	Hard	658	8945	0.07
	Oerlikon	696	8722	0.08
	Altstetten	357	4590	0.08
	Sihlfeld	1201	13501	0.09
	Unterstrass	880	9744	0.09
				0.10
				0.11
				0.11
				0.16
				0.20
				0.21
				0.25
				0.26
				0.27
				0.27
				0.31
				0.48
				1.08
				1.18
				0.05
Outskirt West				
Cluster 3 (blue)	Hirzenbach	121	5011	0.02
Outskirt North-East	Schwamedingen-Mitte	230	5050	0.05
Cluster 4 (green)	Witikon	105	2242	0.05
Outskirt South-East	Hirslanden	344	3410	0.10
	Weinegg	452	3148	0.14
	City	3006	1245	2.41
Cluster 5 (orange)	Leimbach	73	2107	0.03
Outskirt South				

The most attractive urban neighbourhoods are the ones with a low workplace-population-ratio. This means that these neighbourhoods are not business districts.

Summary

If you are young and want to move to Zurich, you should move to one of the following neighbourhoods:

- Saatlen
- Affoltern
- Friesenberg
- Höngg
- Seebach



Thank you!