

The Diversity of Restaurants in Cities: St. Petersburg, Toronto, Berlin and Paris



Introduction

In this project, I will try to compare the diversities of restaurants of four cities - St. Petersburg, Toronto, Berlin and Paris. These cities are quite vibrant: they have a lot of tourists and developed economies. Have they got a high diversity of restaurants? How many types of restaurants can we reveal? What factors have an influence on diversity? What is common between these cases? These and other questions are planned to be answered.

It is essential to say that this project has two goals - business and anthropological. Firstly, to compare the diversities of restaurants and show similar and different features, and, secondly, to understand the cultural aspect of established correlations.

Data

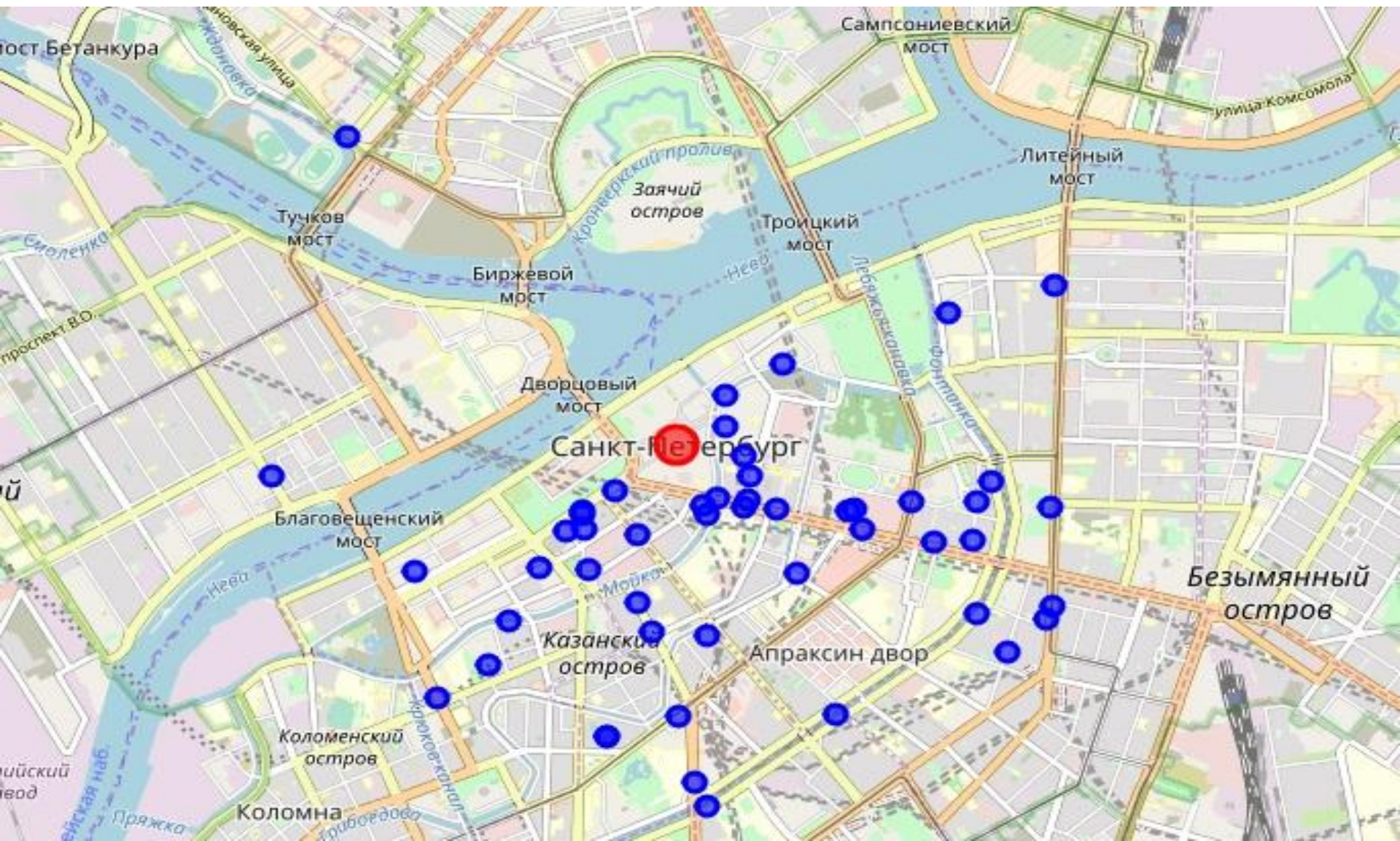
There are several types of data, which will be useful for solving the research problem:

- number of restaurants in each city and types of these restaurants;
- mean number of each type of restaurant.

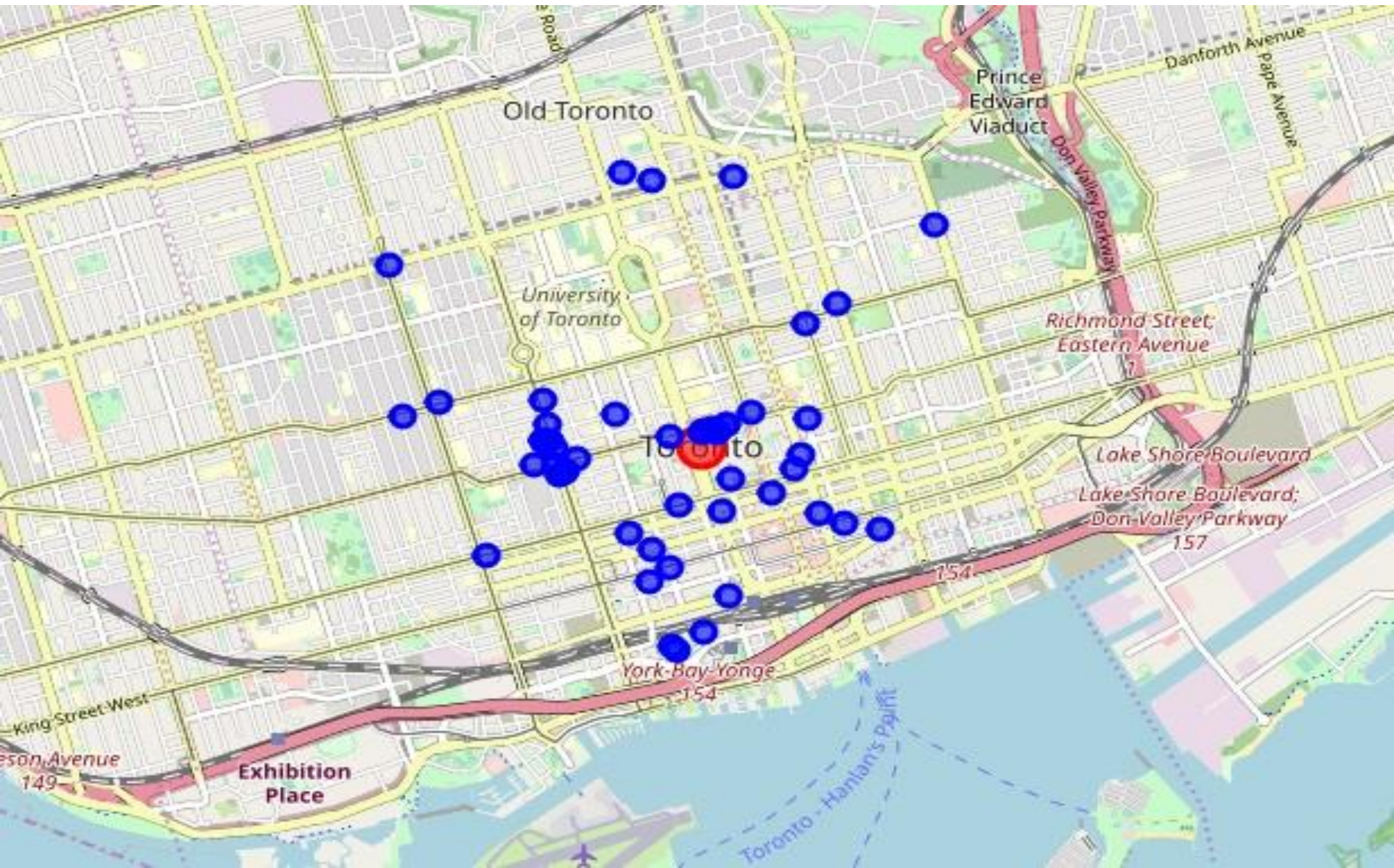
Following data sources will be needed to extract/ generate the required information:

- number of restaurants and their type will be obtained using Foursquare API;
- coordinates of cities and restaurants will be obtained using GeoPy.

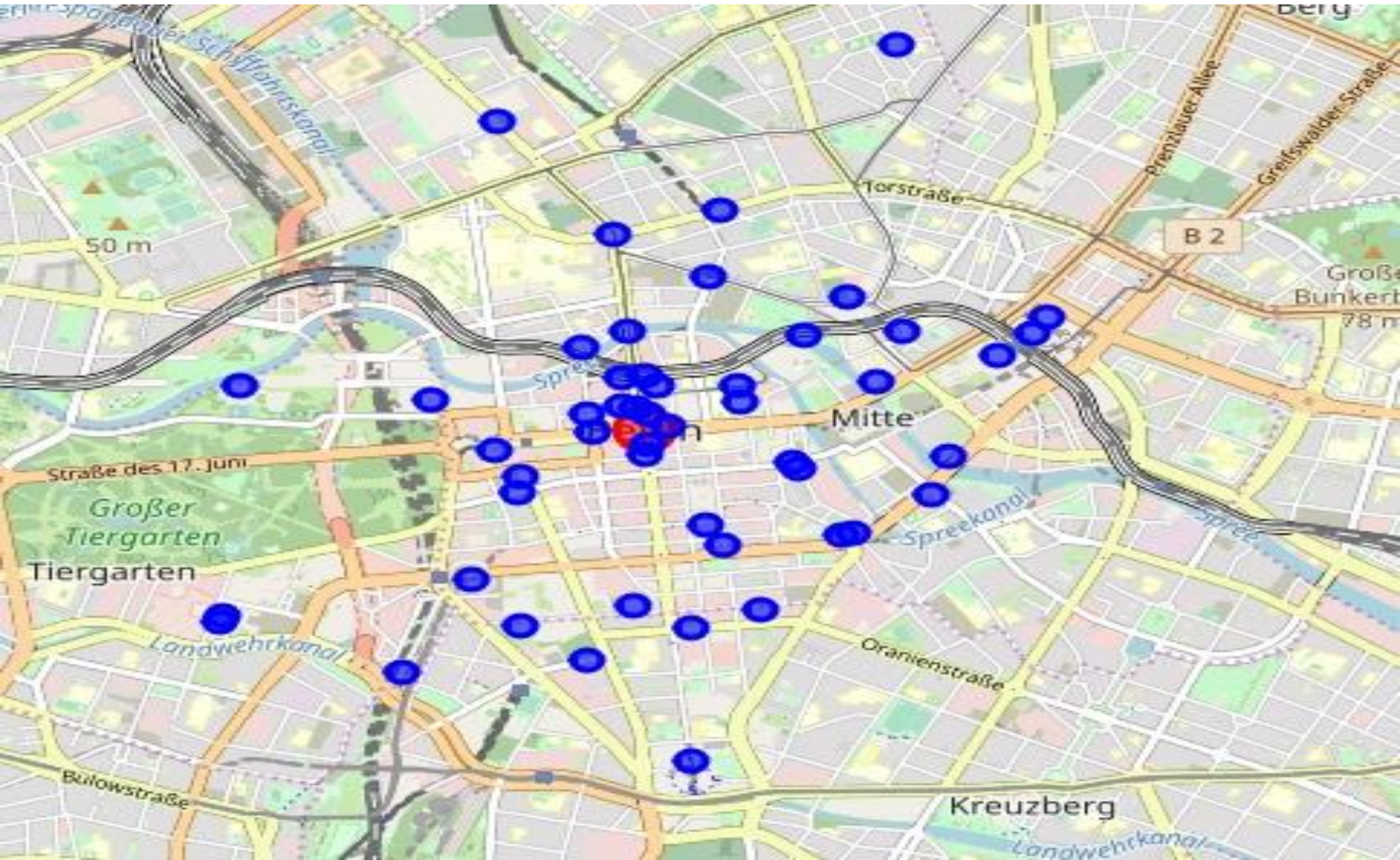
Map of St. Petersburg

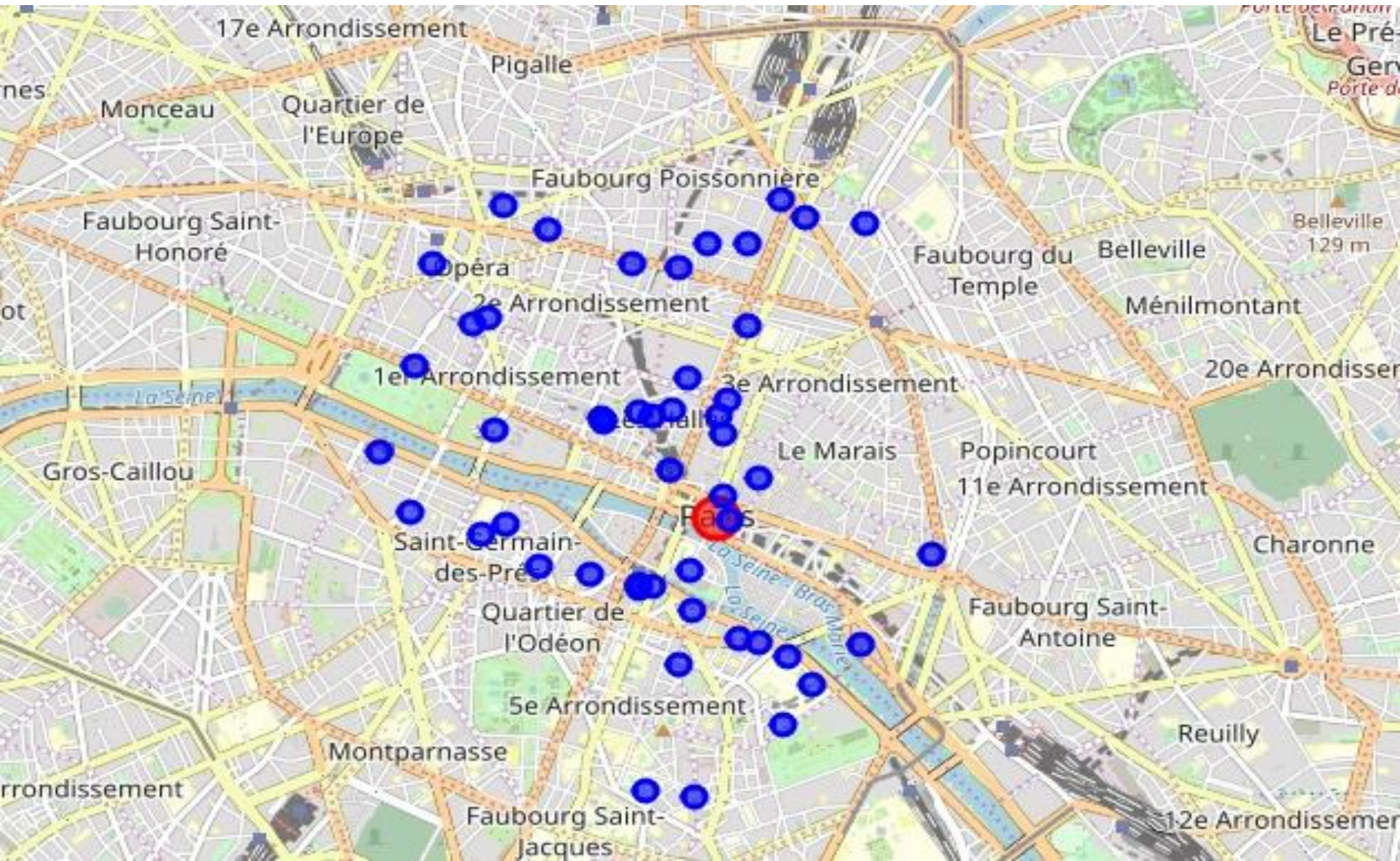


Map of Toronto



Map of Berlin





Methodology

The purpose of this project is to compare the restaurant diversity of 4 cities - St. Petersburg, Toronto, Berlin and Paris. The purpose requires to determine:

- a quantity of unique categories for each city;
- the 10 most common restaurants by their types;
- the similarity and difference between the restaurant diversities of cities;
- the most common type of restaurant for all cities.

Firstly, we should drop excess information from tables.

Secondly, we should clean data and remove all missing values.

Thirdly, 4 tables should be joined into one.

Fourthly, our table should be transformed by `get_dummies` and `instruments` for sorting.

Finally, we could visualize correlations between most common types of restaurants.

The Toronto table

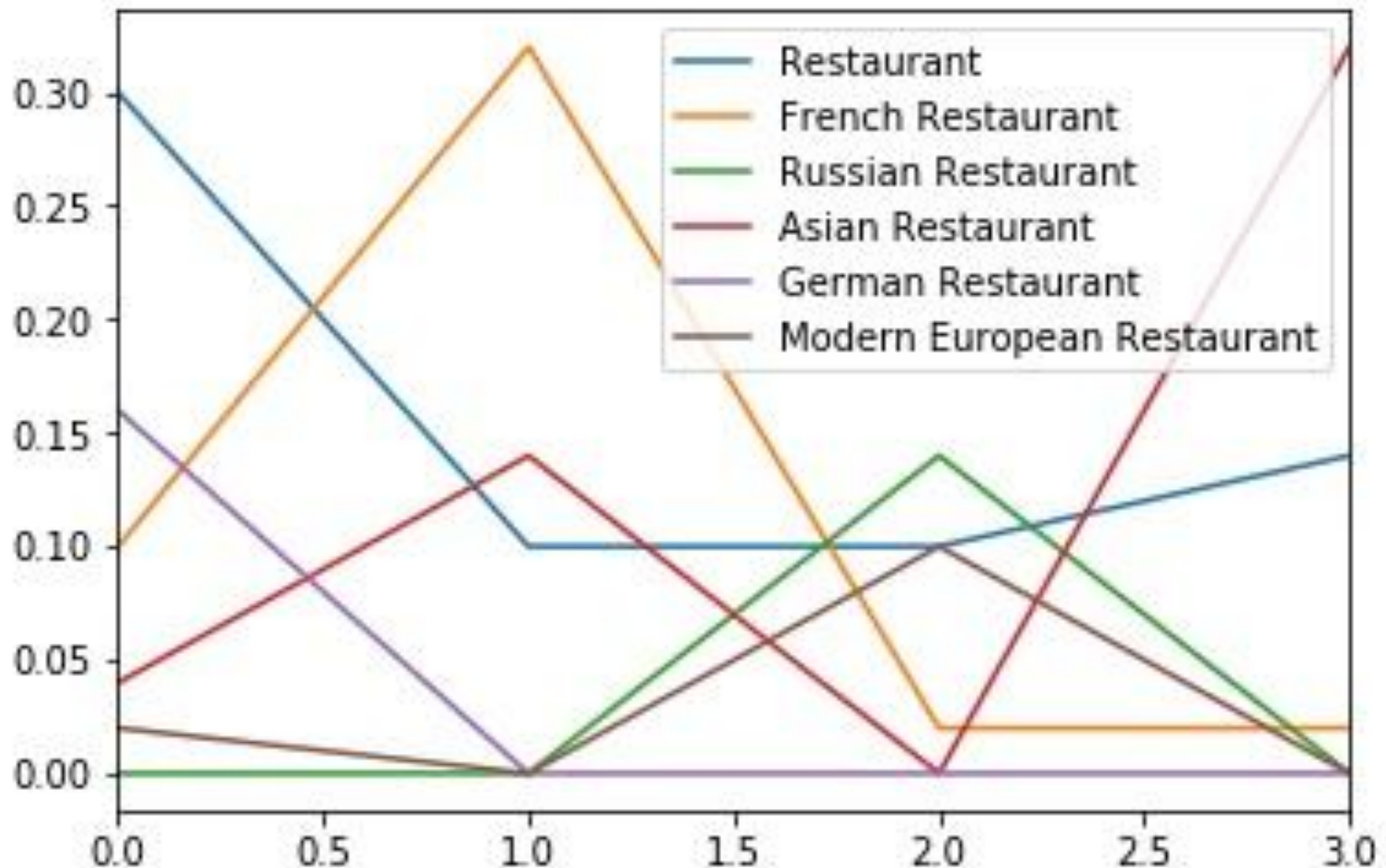
	categories	city	name	lat	lng
0	American Restaurant	Toronto	Hemispheres Restaurant & Bistro	43.654884	-79.385931
1	Asian Restaurant	Toronto	Rol San Restaurant 龍笙樓	43.654318	-79.398650
2	Asian Restaurant	Toronto	Goldstone Noodle Restaurant 金石	43.652278	-79.398039
3	Restaurant	Toronto	Victoria's Restaurant	43.649298	-79.376431
4	Wine Bar	Toronto	360 Restaurant	43.642537	-79.387042
5	Asian Restaurant	Toronto	Sky Dragon Chinese Restaurant 龍翔酒樓	43.652783	-79.398174
6	Asian Restaurant	Toronto	Swatow Restaurant 汕頭小食家	43.653866	-79.398334
7	Restaurant	Toronto	Azure Restaurant & Bar	43.644749	-79.385113
8	Asian Restaurant	Toronto	North-East Chinese Restaurant 華北美食	43.653185	-79.396677
9	Asian Restaurant	Toronto	Hong Shing Chinese Restaurant	43.654925	-79.387089
10	Indian Restaurant	Toronto	Aroma Fine Indian Restaurant	43.646463	-79.389644
11	American Restaurant	Toronto	The Hot House Restaurant & Bar	43.648824	-79.373702

As result we get table with data of restaurants for each city.

10 most common types of restaurants

	City	1st Most Common Restaurant	2nd Most Common Restaurant	3rd Most Common Restaurant	4th Most Common Restaurant	5th Most Common Restaurant	6th Most Common Restaurant	7th Most Common Restaurant	8th Most Common Restaurant	9th Most Common Restaurant	10th Most Common Restaurant
0	Berlin	Restaurant	German Restaurant	French Restaurant	Breakfast Spot	Vietnamese Restaurant	Hotel Restaurant	Asian Restaurant	Café	Hotel Bar	Italian Restaurant
1	Paris	French Restaurant	Asian Restaurant	Restaurant	College Cafeteria	Fast Food Restaurant	Turkish Restaurant	Middle Eastern Restaurant	Italian Restaurant	Lebanese Restaurant	Food Court
2	St. Petersburg	Russian Restaurant	Restaurant	Modern European Restaurant	Hotel Restaurant	Eastern European Restaurant	European Restaurant	Caucasian Restaurant	Café	Indian Restaurant	Italian Restaurant
3	Toronto	Asian Restaurant	American Restaurant	Restaurant	Indian Restaurant	Breakfast Spot	Canadian Restaurant	Vietnamese Restaurant	Hotel Restaurant	Bar	Caribbean Restaurant

First 3 most common types of restaurants and their correlations



Conclusion

The results of our analysis let us make several conclusions:

- only 2 types make up more than 10 per cent of the total types of restaurants for studied cities - **Asian restaurant (15 %)** and **French restaurant (14 %)**. It is a rich diversity of restaurants;
- national culture has influenced the diversity of restaurants. For example, the most common type of a restaurant in Paris is French, and in St. Petersburg - Russian. However, the Toronto case is an exception which proves the rule, because Canada bases on a multicultural foundation;
- the popularity of Asian cuisine is due to the influence of the globalization. It is interesting that the least quantity of this type of a restaurant is in the least globalized city - St. Petersburg.