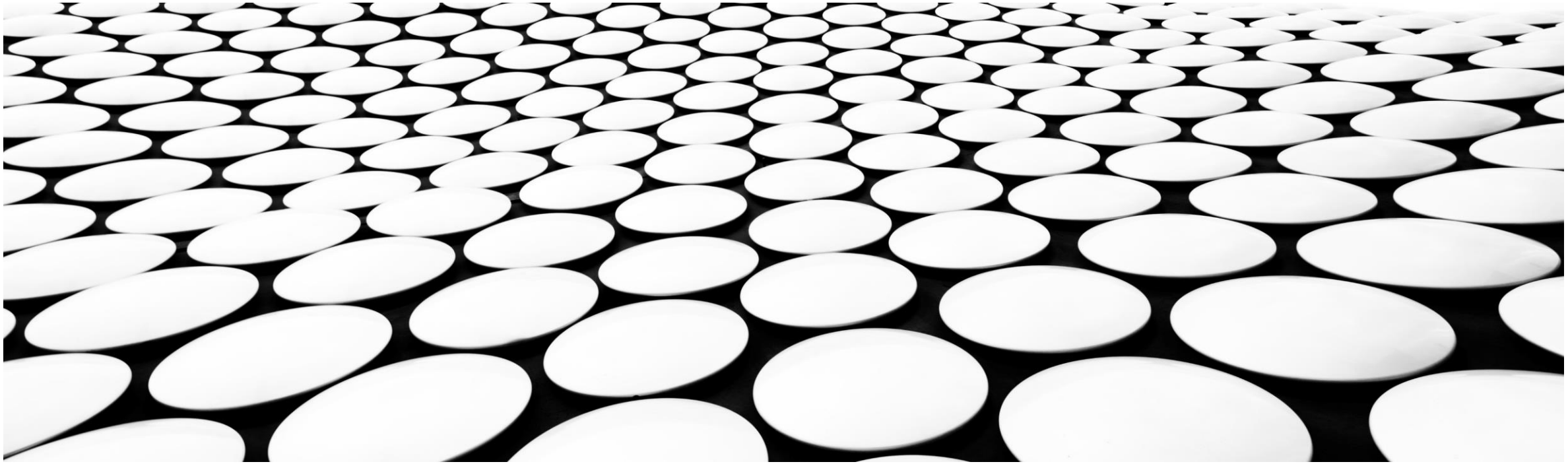
APPLIED DATA SCIENCE CAPSTONE – FINAL PROJECT



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1. BUSINESS PROBLEM

Where to go for Pizza?

- Let’s say a tourist or a citizen wants to have some pizza. The good idea can be to go to a place where several options of Pizza places are located. The goal of this project is to analyze Pizza restaurants in Moscow and Saint-Petersburg, two biggest cities in Russia, and propose places to go for pizza-seekers.
- Target audience: People who want to find a place where different Pizza places can be found nearby.

2. DATA AND METHODOLOGY

Data

The FourSquare API will be used to collect data about locations of Pizza restaurants in 2 major cities in Russia – Moscow and Saint-Petersburg.

Methodology

The main goal in this analysis is to define a place where Pizza restaurants show the highest density.

The Four Square API will be used to get venues in the cities.

CategoryID (4bf58dd8d48988d1ca941735) will be set to show only Pizza places. Unfortunately, Foursquare limits observations to maximum of 100 venues per query.

This request will be repeated for the both studied cities. Then we get top 100 venues, save them and plot them on the map for visual representation.

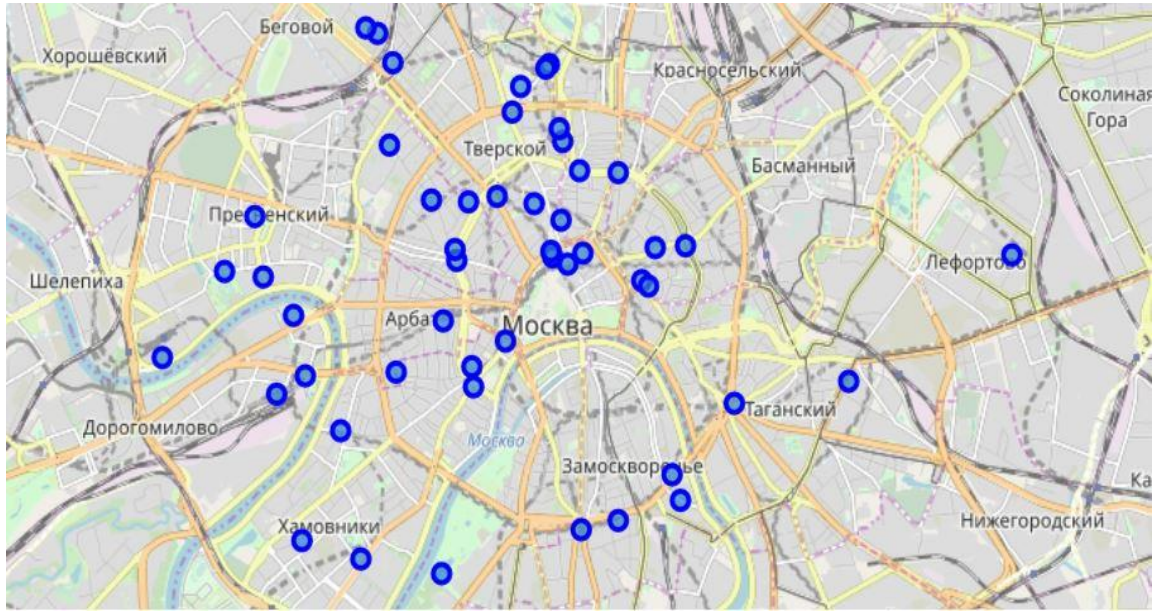
Next, to get an indicator of the density of Pizza Places, I calculate a centroid of the venues to get the mean longitude and latitude values. Then the mean of the Euclidean distance is calculated from each venue to the mean coordinates. This indicator will be used for evaluation.

3. EXPLORING PIZZA RESTAURANTS

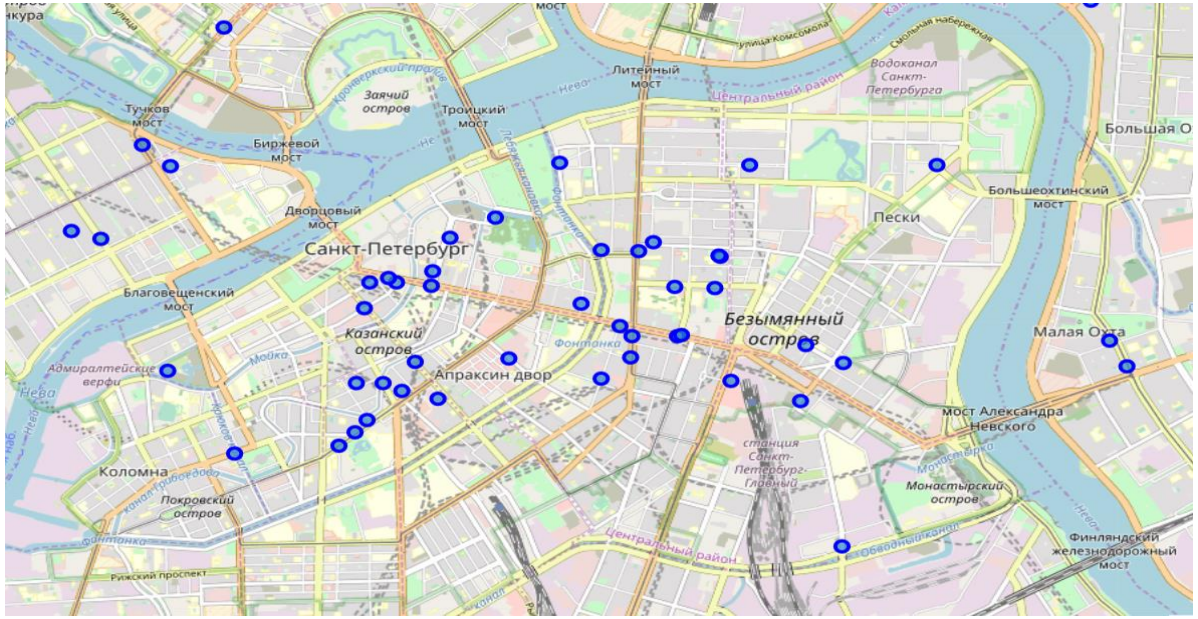
Using the Four Square API 100 Pizza places in Moscow were obtained (overall there are 184 of them in Moscow and 148 in Saint-Petersburg, but Foursquare limitation is 100)

Using geospatial library Folium geographical coordinates were added.

Moscow



Saint-Petersburg

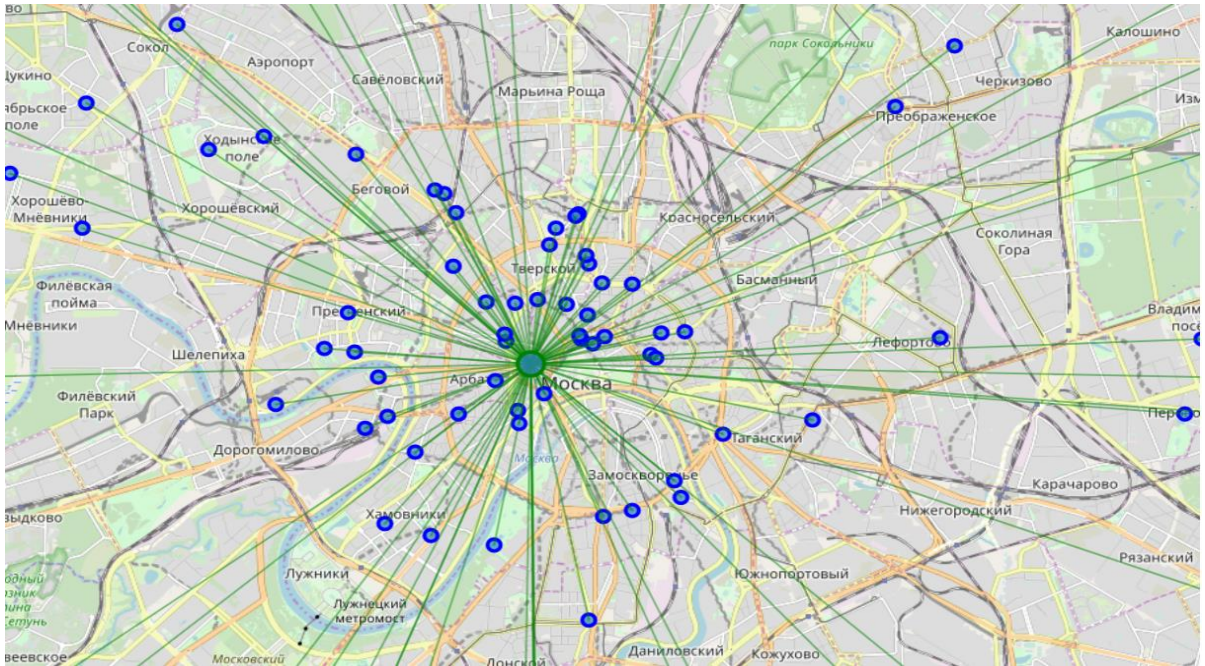


4. ANALYZING GEOSPATIAL POSITIONS OF PIZZA RESTAURANTS

From the first sight on the map it's difficult to state which city has higher density of Pizza places. For further analysis mean coordinate and mean distance to mean coordinate will be calculated. It will allow us to define a place from which a way to different Pizza places is the shortest. This place will be highlighted by blue circle, distances – by green lines.

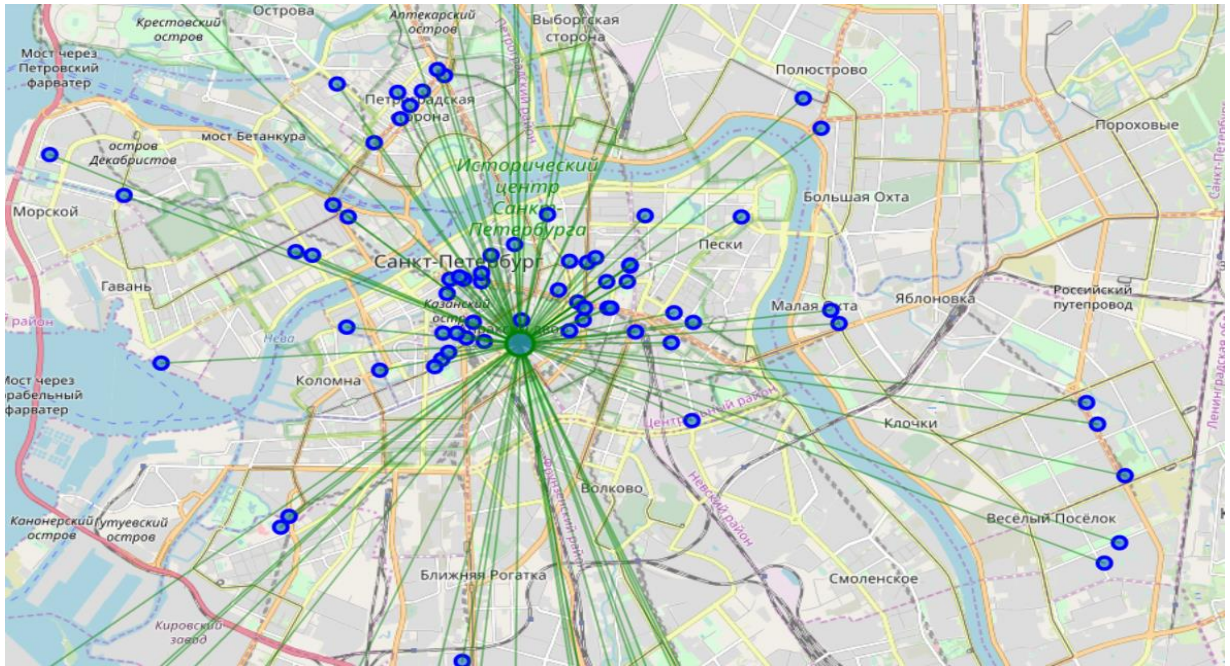
Moscow

Mean Distance to Mean coordinates: 0.0907



Saint-Petersburg

Mean Distance to Mean coordinates: 0.0644



5. CONCLUSION

Now we can conclude that Moscow is better city for Pizza lovers because people can experience higher density in places that they can choose.