

# Choosing the place for gym in Yekaterinburg

## 1. Introduction

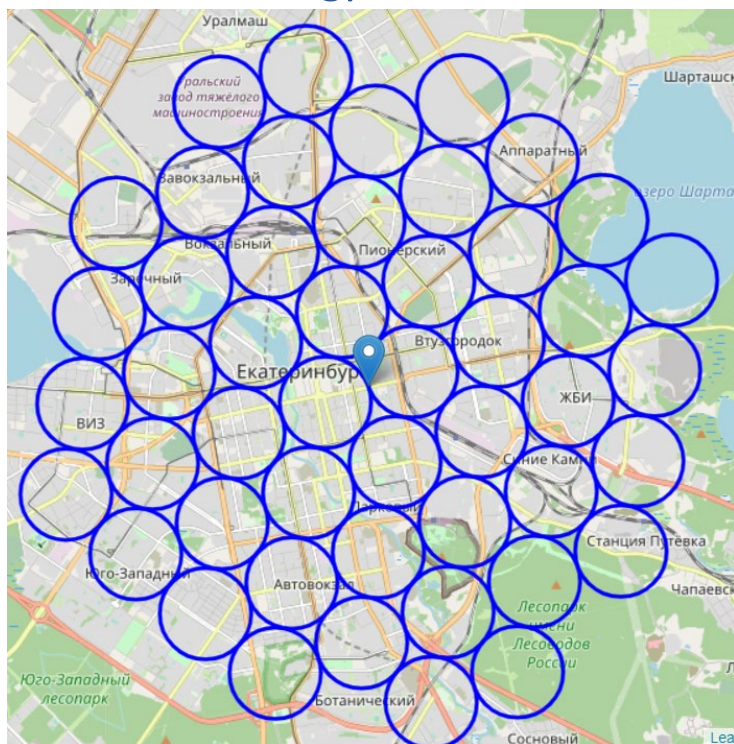
With the popularity of healthy lifestyle demand of gyms is growing. Hence, there is an opportunity to open a successful gym. One of the most crucial features of a profitable gym is its placement. This work is focused on research of the possible places where gym can be opened in Yekaterinburg.

## 2. Data sources

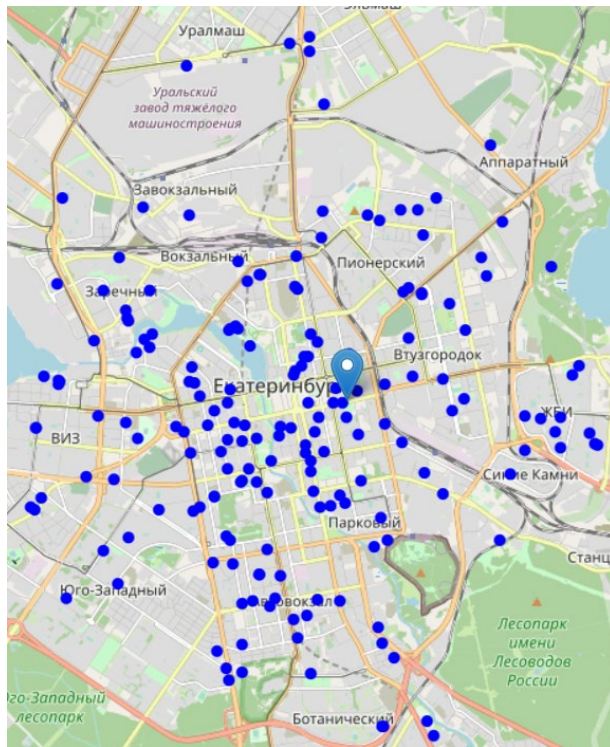
To conduct the analysis, I used further sources:

- Google API to get geographical coordinates of the center of Yekaterinburg (Ulitsa Malysheva);
- Foursquare database through its API to get data about competitors.

## 3. Methodology



For analysis purposes, Yekaterinburg was separated into small regions around the center of the city with radius = 800 meters. Then the data about the density of competitors in each region was collected using Foursquare API.



Explanatory data analysis showed:

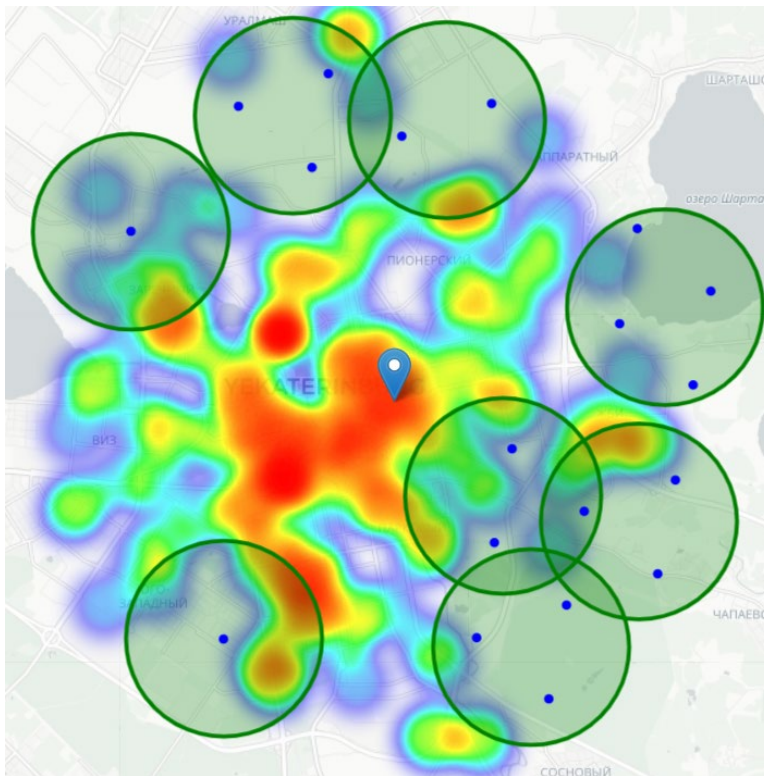
- Average number of gyms in every area with radius=800m: 4.0625
- Locations with no more than two gyms nearby: 27
- Locations with no gyms within 600m: 20
- Locations with both conditions met: 19

For further analysis I chose 19 areas where no more than two gyms nearby and no gyms within 600 meters.



Some of these areas were placed in irrelevant locations (lake, manufacturing zones etc.). I dropped them for further analysis and selected possible candidates for the result.

These candidate-areas were clustered into 8 zones based on their location using K means approach.



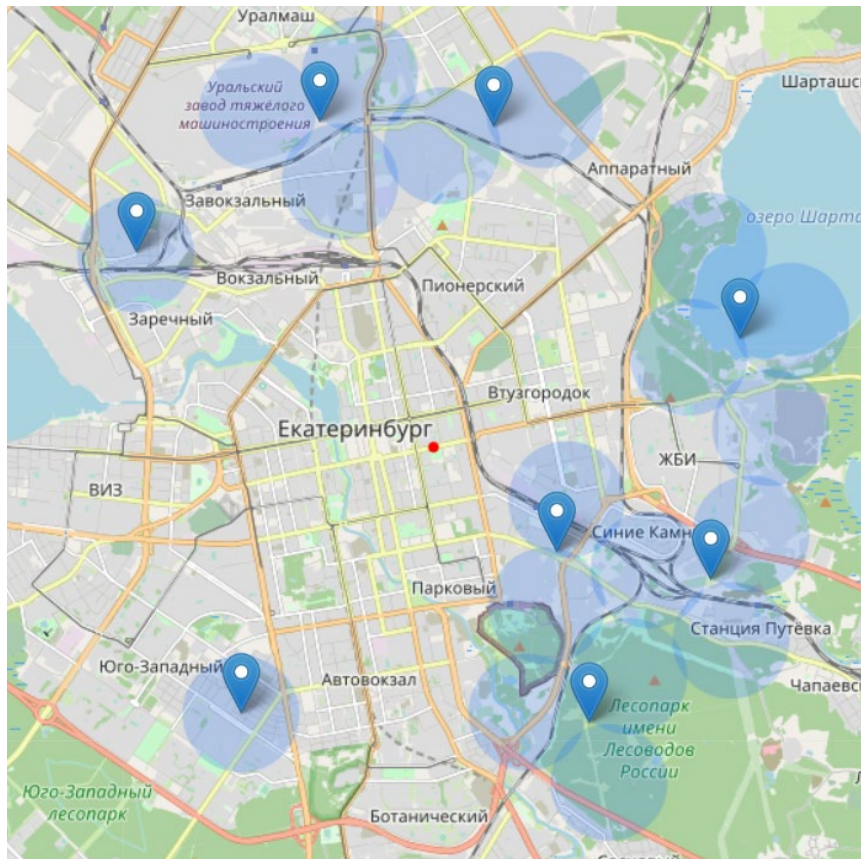
## 4. Results

The centers of these clusters are addresses which can be used as the start points. Investigation of areas around these addresses will allow to find a profitable place for gym opening.

Possible addresses for gym opening are located around these points:

- Sibirskiy Trakt, 14
- Ulitsa Otdykha, 107
- Ulitsa Raskovoy, 56
- Ulitsa Ol'khovskaya, 52
- Ulitsa Prostornaya, 148
- Ulitsa Frontovyykh Brigad, 18 Corp 2
- Ulitsa Istochnaya, 2a





## 5. Conclusion

In this study, I was able to find location for a new business. Gym is just an example and Foursquare database can be used for each type in almost every city. This work can be adjusted for other types and cities, so this investigation can be reprocessed easily.