Opening a new restaurant in Warsaw, Poland

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Business problem

The objective of this project is to analyse and select the best locations in the city of Warsaw, Poland to open a new restaurant. Using Machine Leaning methodology such as clustering. The final analysis will answer the question:

Where is the best spot to open new restaurant/bar/... in Warsaw?

Data

Data required:

- List of neighbourhoods in Warsaw, Poland with their geolocation (geojson file).
- Venue data, data related to any gastronomic businesses in Warsaw, Poland.
- Data about number of residents in each neighborhood in Warsaw, Poland.

Data sources:

- Multiple open source websites: WIkipedia, Github
- Foursquare API

Methodology

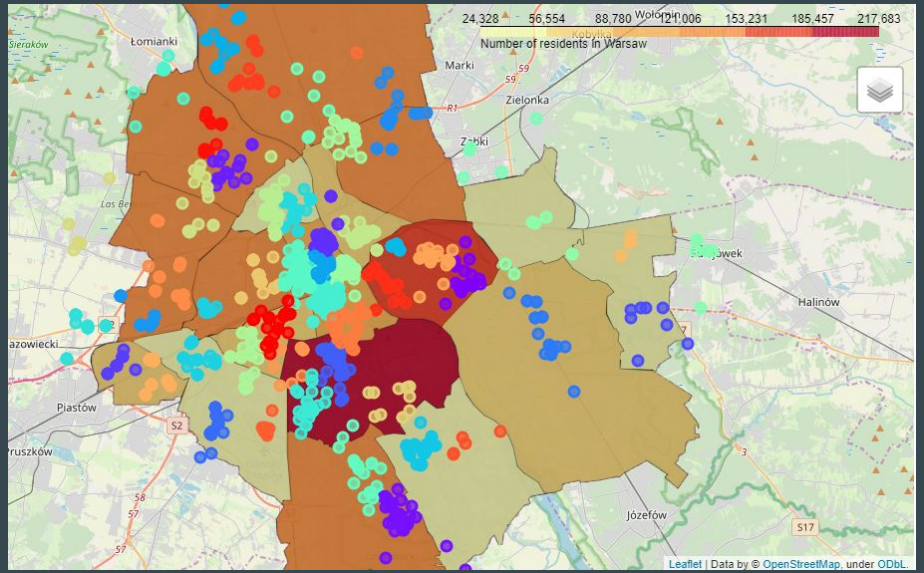
- Web scraping of Wikipedia and Github
- Foursquare API for venues information
- K-means clustering to find ”circles” of venues such as shopping malls, neighbourhoods of restaurants and all other gastronomical places
- Rank the neighbourhoods according to created ratio.

Results

- Warsaw divided into 50 “circles”

  of venues

- The best neighbourhood is one with
  - many residents
  - not many venues
- Algorithm picked the best locations:
  - Mokotów
  - Wola,
  - Praga Północ
  - Bemowo
  - Ursus
  - Praga Południe



Discussion

As observations noted from the results section, the best locations are located in most crowded neighbourhoods, but some of them are excluded such as Ursynów. Which shows us that this method could be reliable and the recommendations are targeted correctly.

Conclusion

In this project, I have gone through the process of identifying the business problem, specifying all requirements and performing Machine Learning solution to it. The answer to business question was produced and any relevant stakeholders can take an opportunity to use these results to open their new venue in Warsaw, Poland.