Find Location for Japanese Restaurant in Beijing

COURSERA CAPSTONE PROJECT

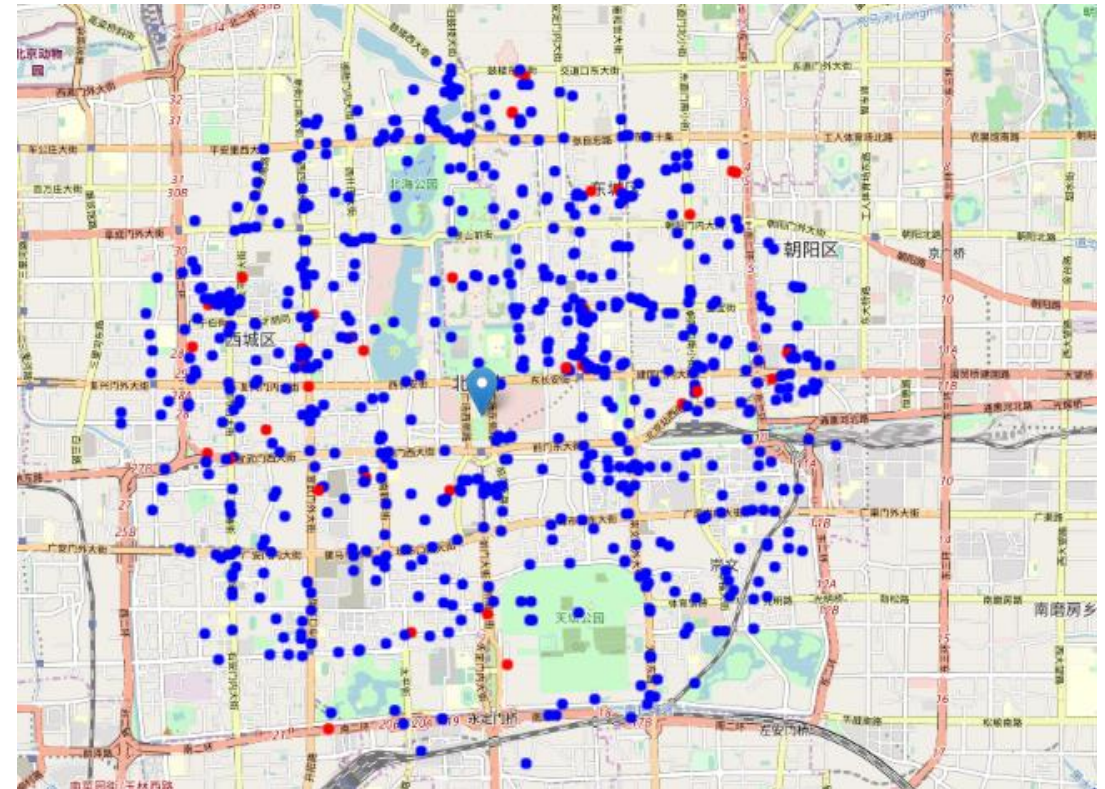# Value for location recommendation for new restaurant

- Beijing is a big cities, there are thousands of restaurants.

- A good location of a restaurant have a lot of benefit such as bringing high human traffic.

- The stakeholders also would like to avoid to open a new in the place that are full of competitors.
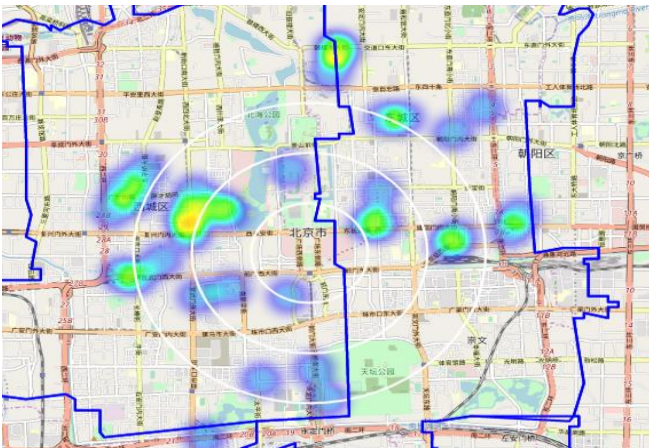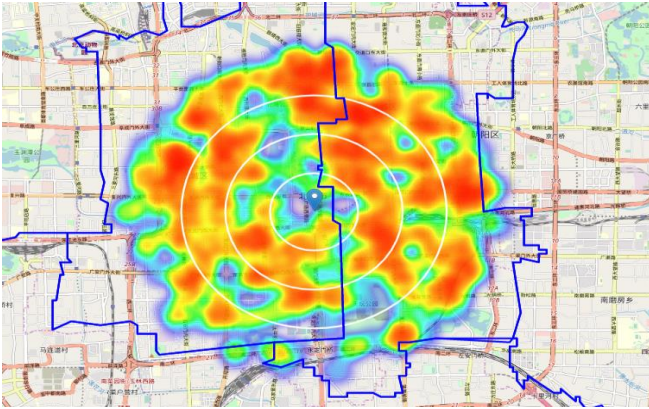
Data Source – Baidu Map and Foursquare API

- Baidu Map API is used to get the detail address and longitude/latitude information.

- Foursquare API is used to get number of restaurants with their types and location in every neighborhood.

- Coordinate of Beijing center will be obtained using Baidu Map API geocoding of well-known Beijing location. (Tiananmen)

Data Cleaning – Find Exist restaurant location

- Target in the area of ~6km around Beijing center, using Baidu Map API.

- Find food category and Japanese restaurant categories by Foursquare API.

- Visualize in folium map, as shown in the right. Japanese restaurant is specified in red dot.
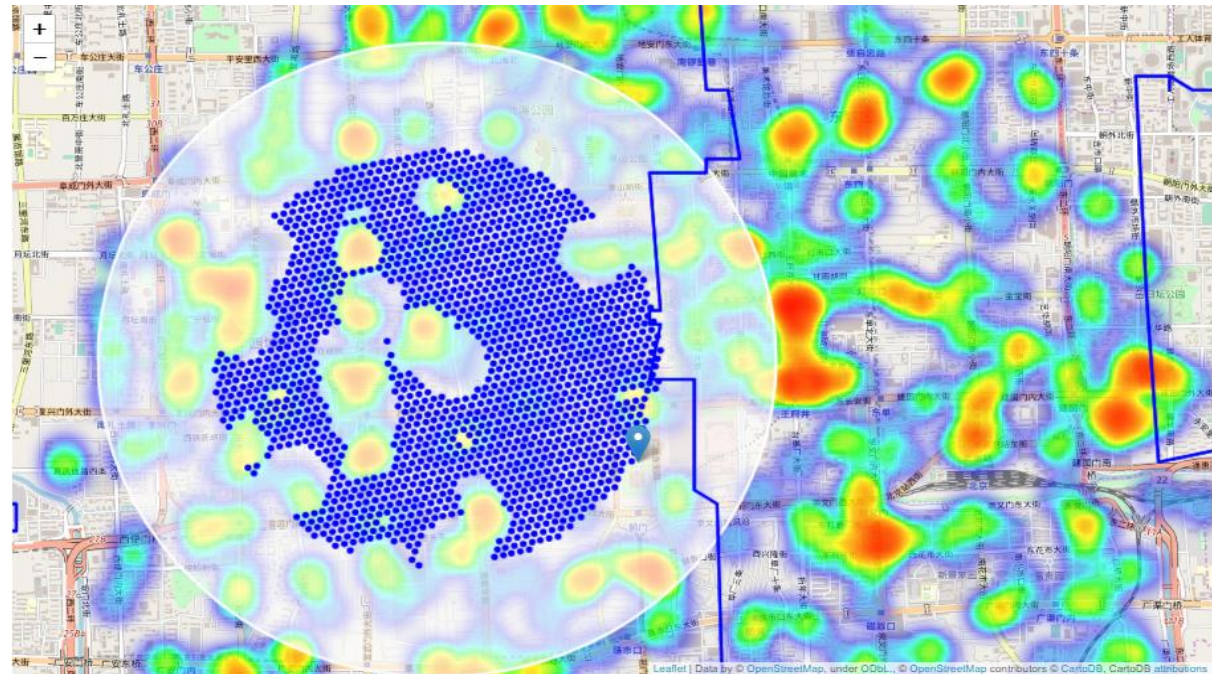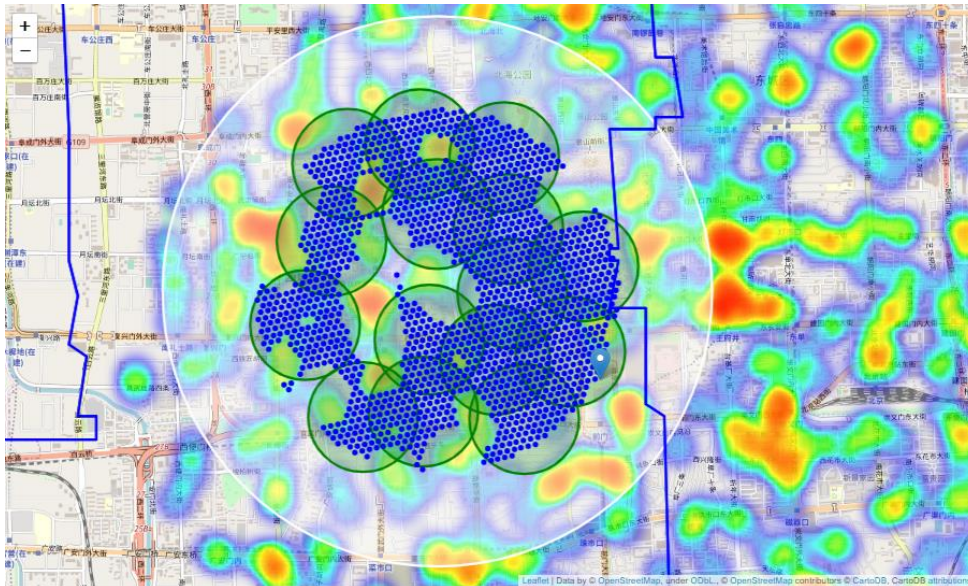
Data Cleaning – New, narrow target area

After analysis on the restaurant headmap, the closest pockets of low Japanese restaurant density position is found in the northwest.

Then new good locations can be showed in below heat map.

Clustering new locations and finalize the recommended addresses

- K-Means is used to cluster new good locations, and create a heat map as below.

- The center of those good locations is the output of our analysis.

Conclusions

- Purpose of this project was to identify Beijing areas close to center with low number of restaurants(particularly Japanese restaurants) in order to aid stakeholders in narrowing down the search for optimal location for a new Japanese restaurant.

- Final decision on optimal restaurant location will be made by stakeholders based on specific characteristics of neighborhoods and locations.

- Some other factors also need to be taken into consideration, including attractiveness of each location, levels of noise to major roads, real estate availability, prices, social and economic dynamics.