Predicting neighborhood for starting Indian Restaurant

Determine the city center of Toronto and explore the neighbourhoods surrounding it

- Toronto is one of the prominent places to start any new venture. Given that there is rise in immigrants and tourists, we present a report to stakeholders holding analysis of the various cuisines available in the city center of Toronto and understand the area available to submit the

- We will try to find an optimal location for stakeholders interested in opening an Indian restaurant in Toronto, Canada.

- We will try to detect locations that are not already crowded with restaurants, with no Indian restaurants in vicinity, and also close to city center (Nathan Plaza Square, Toronto)

Data acquisition and Cleansing

- We have scraped the data from Wikipedia for postal codes in Canada. We'll be using additional sources to determine the coordinates of the neighbourhood.

- Next up, we clutter the insignificant rows from the data, assign coordinates against each post codes and group the neighbourhoods based on boroughs and post codes.

- Next up, we filter the rows that contains Toronto and cast the resultant dataframe onto a map using folium to visualize the demographics and frequency of venues in each neighbourhood. We run this search approx. 2.5Kms radius around the city center to look for tourists spots that has more number of people coming in.

- Kensington Market and Cabbage Town meets the above criteria and upon using folium, we arrive at the conclusion that these two neighbourhoods are best suited for starting an Indian restaurant.

- Both these neighbourhoods are revered diversified in nature, and people around the globe come to visit the Victorian homes and explore the different cuisines available at their best.
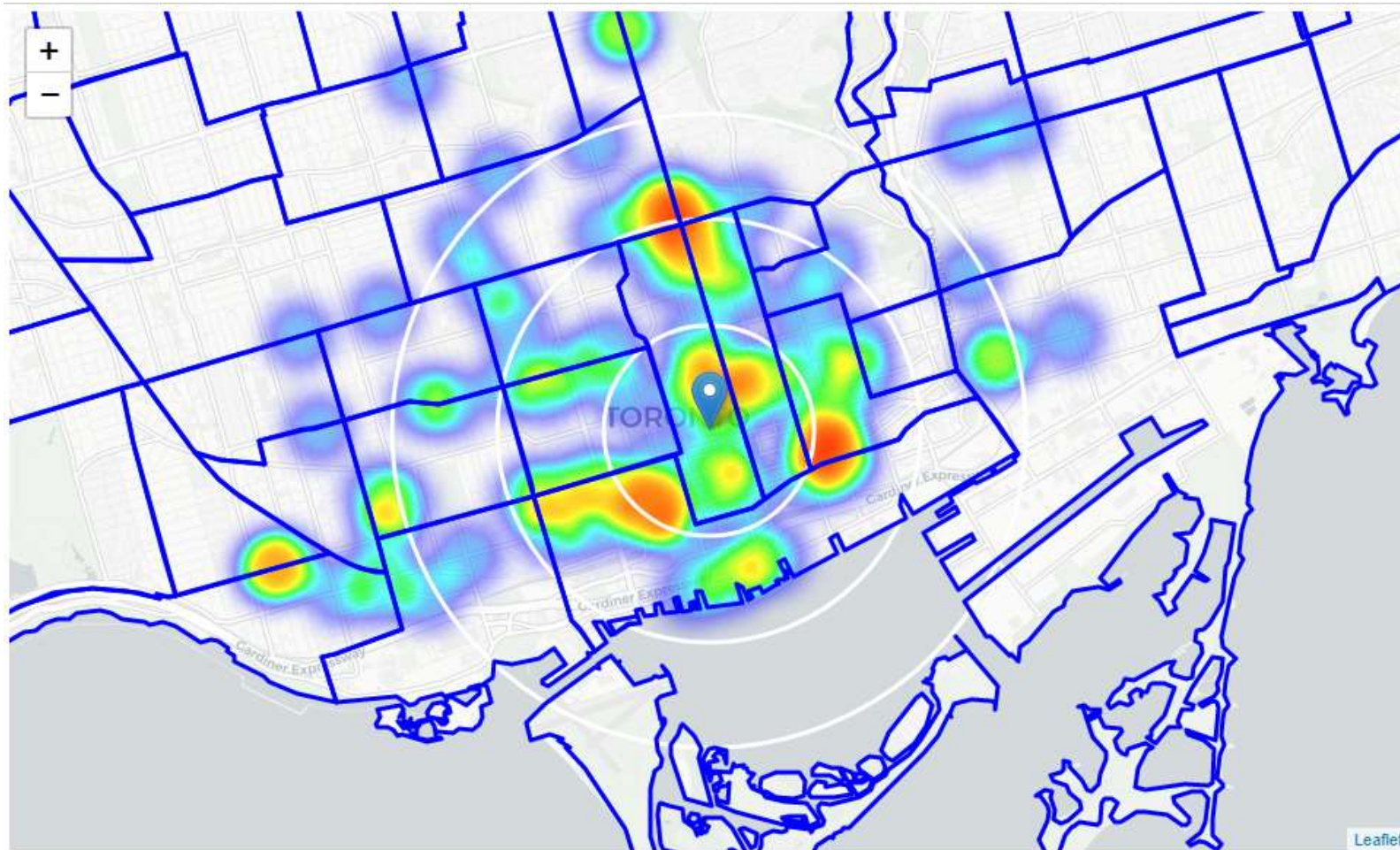
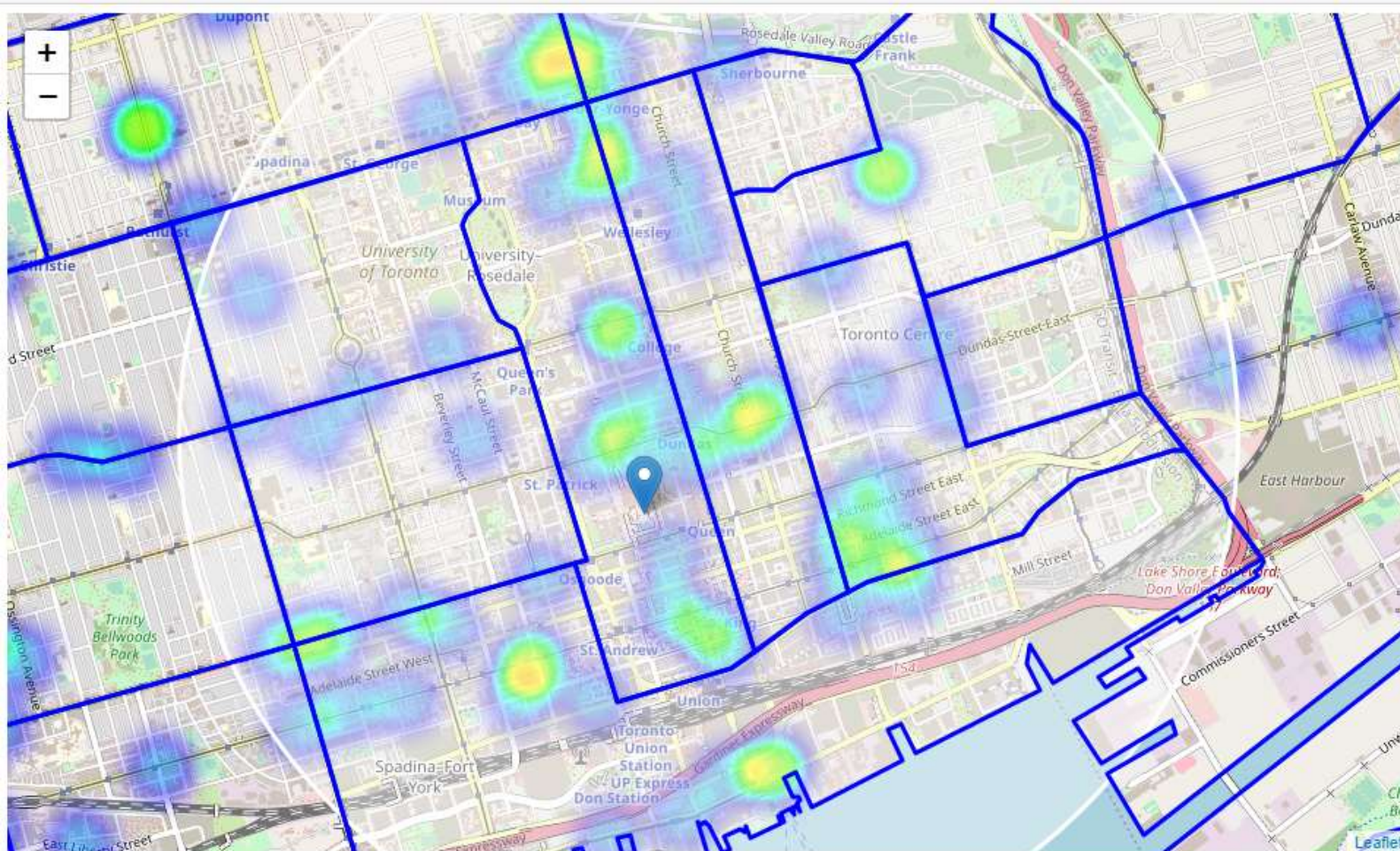**Radius of 2.5 Km around city center – Nathan Plaza Square, Toronto**
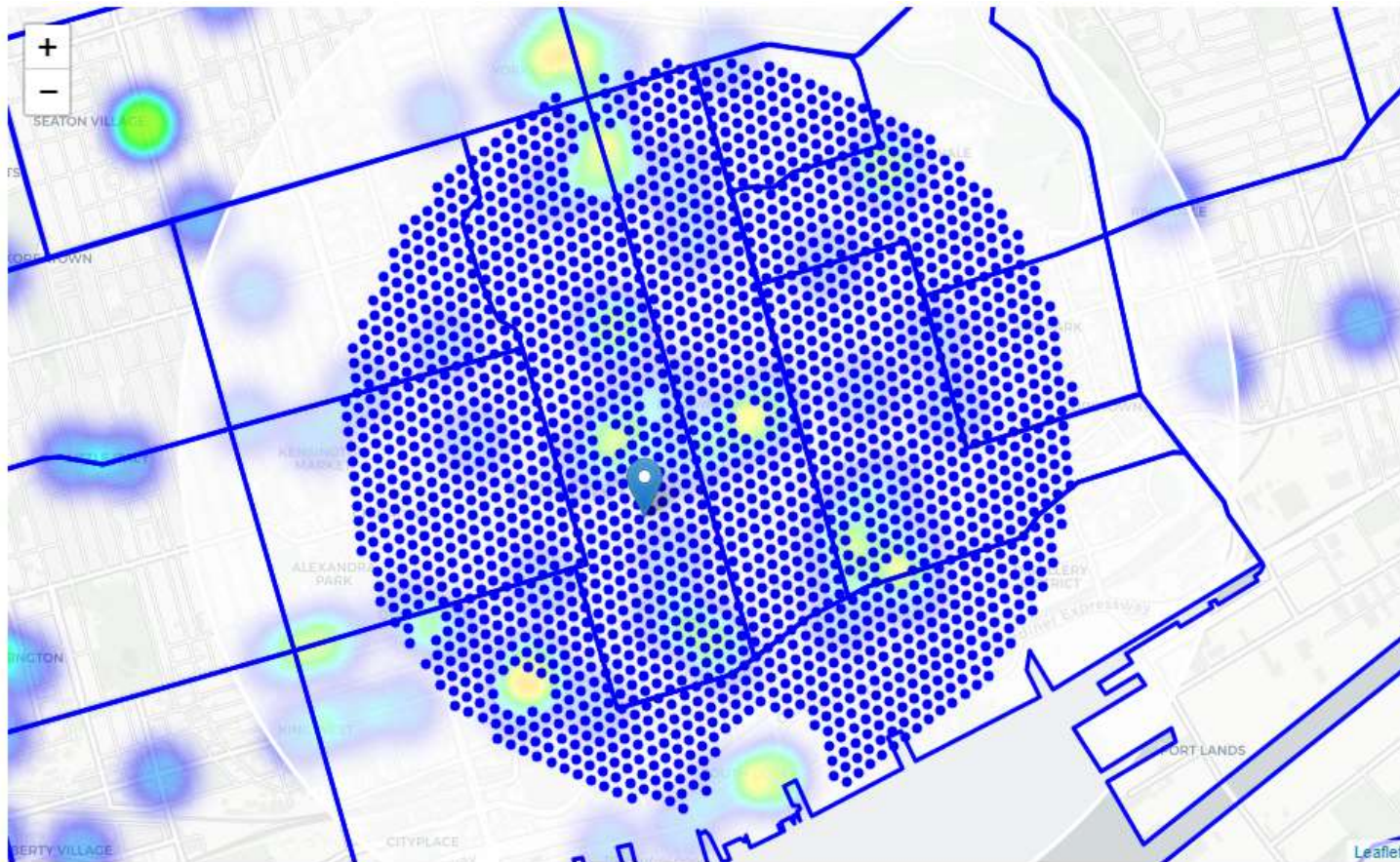
Total number of restaurants in vicinity

Folium heatmap to show restaurant density and potential places where the new venture can be started

A closer look at the target neighbourhoods – Kensington Market and Cabbage Town
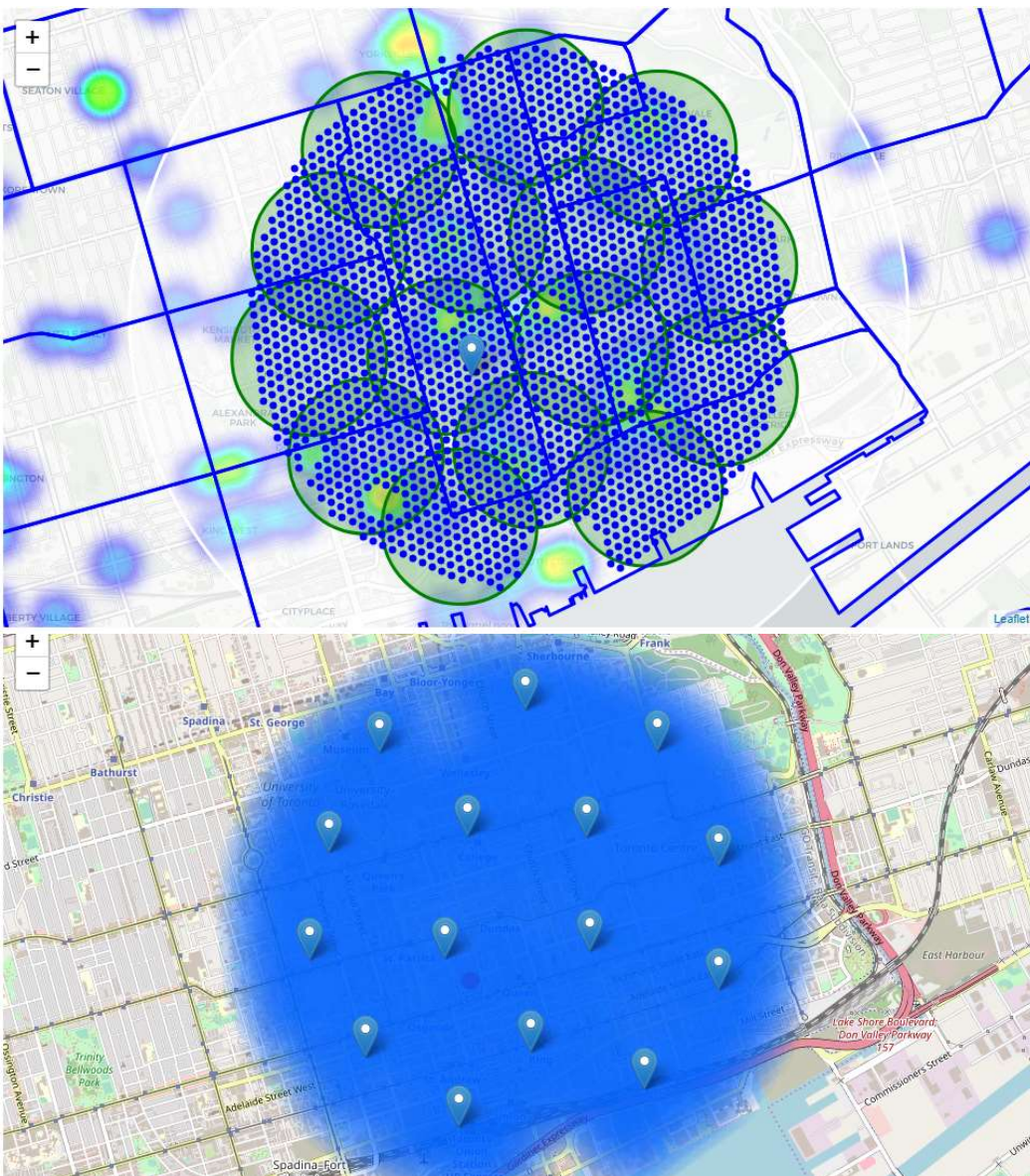
We now see that the region we are targeting does not have two restaurants in the radius of 250m, and no Indian restaurants closer than 4000m. Any of those locations is a potential candidate for a new Indian restaurant, at least based on nearby competition.

These are potential places where the restaurants can be started
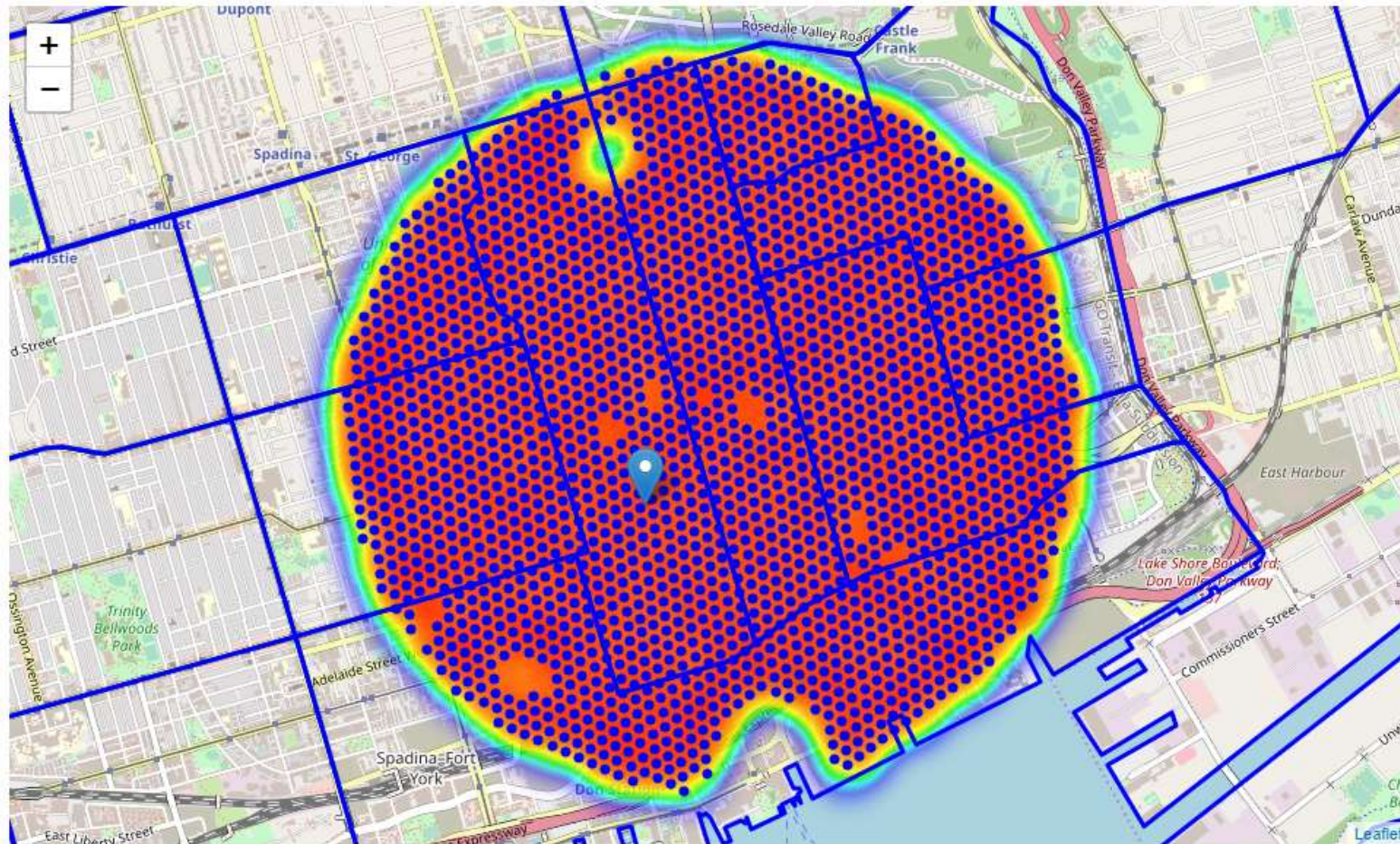
- Our clusters represent groupings of most of the candidate locations and cluster centers are placed nicely in the middle of the zones 'rich' with location candidates.

- Addresses of those cluster centers will be a good starting point for exploring the neighborhoods to find the best possible location based on neighborhood specifics.

- Considering the reviews from most of travel sites (Airbnb & theculturetrip), Kensington Market and Cabbage Town appears to be a good spot for the venture.

Conclusion and Future Directions

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

- By calculating restaurant density distribution from Foursquare data we have first identified general boroughs that justify further analysis (Kensington Market and CabbageTown), and then generated extensive collection of locations which satisfy some basic requirements regarding existing nearby restaurants.

- Clustering of those locations was then performed in order to create major zones of interest (containing greatest number of potential locations) and addresses of those zone centers were created to be used as starting points for final exploration by stakeholders.

- Final decission on optimal restaurant location will be made by stakeholders based on specific characteristics of neighborhoods and locations in every recommended zone, taking into consideration additional factors like attractiveness of each location (proximity to park or water), levels of noise / proximity to major roads, real estate availability, prices, social and economic dynamics of every neighborhood etc.