Neighborhood Battle project report

Business understanding

My client is a 35 years old food court owner in Paris. He opened his first food court last year in Paris 14eme. His idea for this food court was to provide different kinds of food based on what's most popular in his neighborhood. This probably was a good idea has his business is very successful now. So he decided to open another food court in another place in Paris. He asked for my counseling services to be helped finding where he should open his new business.

His strategy his the following: He want for his new food court to be the same as the one he already have in Paris 14eme. That means he want to provide the same food offer exactly.

He provided me with a list of 19 different neighborhoods in Paris where he has the possibility to buy a property to install his new food court.

The question he want me to answer for him is the following:

From those 19 neighborhoods, what are those that looks like his actual business neighborhood the more, based on the kind of restaurant offer in the area?

Analytics approach

Because the problem to solve is finding similarities between different neighborhoods based on its restaurant offer, I intend to use a clustering Machine Learning technique.

Data requirement

To solve the problem, the following data are required:

1) The list of the places my client prospect to open his new business. This list will be converted into latitude and longitude data in order to use it as entry for foursquare queries.
2) For each of this places, the list of the more popular restaurants in the area will be retrieve via Foursquare API using latitude and longitude data. Venues data from Foursquare will be filtered, only restaurant category venues will be retrieved.
3) A map from folium library will be used to visualized the different places

Data collection

1) The list of the places my client prospect to open his new business and its actual place is provided by my client. Latitude and longitude data for those places will be retrieved trough the French government geoloc API.
2) The list of the most popular restaurant for each place will be retrieve through Foursquare API.