Opening a Greek Restaurant in Ottawa

Introduction

Problem

The client is looking to open a second location for a very successful Greek restaurant chain in Ottawa. Keeping in mind that this is a "fast food" type of chain where customers call in and order ahead before simply picking up their order to go the client would prefer an are with high population, lot of residential homes. That way the customer can grab food on their way home. But also looking at areas with less fast food restaurants, specifically fast food because they are going to be the competition.

Background

The city we are working with is Ottawa, it has a population of 994,837 and is known for being the capital of Canada. Doing a quick Google search for Greek restaurants in Ottawa returns some results but not many, and they are quite spread out. However Ottawa has a rich history of being a city of food, and being very inclusive.

Data

We will be using the Postal Code Data pulled from Wikipedia and also census population data from the StatsCan website. The restaurant data will be pulled from the FourSquare API. Using all this data we will plot clusters on a map to see how the different areas of Ottawa compare in terms of venues. Then having seen the clusters in conjunction with population in those postal code areas we can work out a suitable area to open our restaurant. After having picked an area the next steps would be to find suitable buildings for sale or lease to house the business. Based on our defined criteria above we will be looking at population in neighborhoods, number of residential dwellings, lower number of fast food restaurants in the area.

Methodology

We are looking for high population density, lots of residential dwellings, and an area with few fast food venues.

In the previous step we have collected the required data, including postal codes, neighborhoods, top 10 venues in each neighborhood and population of each neighborhood.

The second step of our analysis will be plotting populations and densities and clustering our neighborhoods based on top 10 venues.

Analysis

We first aggregate all our data into a pandas dataframe using the postal code data, longitude, latitude, neighborhood name, population (2016), total private dwellings (2016). Then using our FourSquare API we can pull our venues for each area and attach those to our dataframe. Having plotted our boroughs onto a map we can label each neighborhood. Now we preform cluster analysis to cluster the neighborhoods based on their top 10 venues for each category. Adding in markers based on population of that area we can clearly visualize the clusters in Ottawa with population levels for each neighborhood.
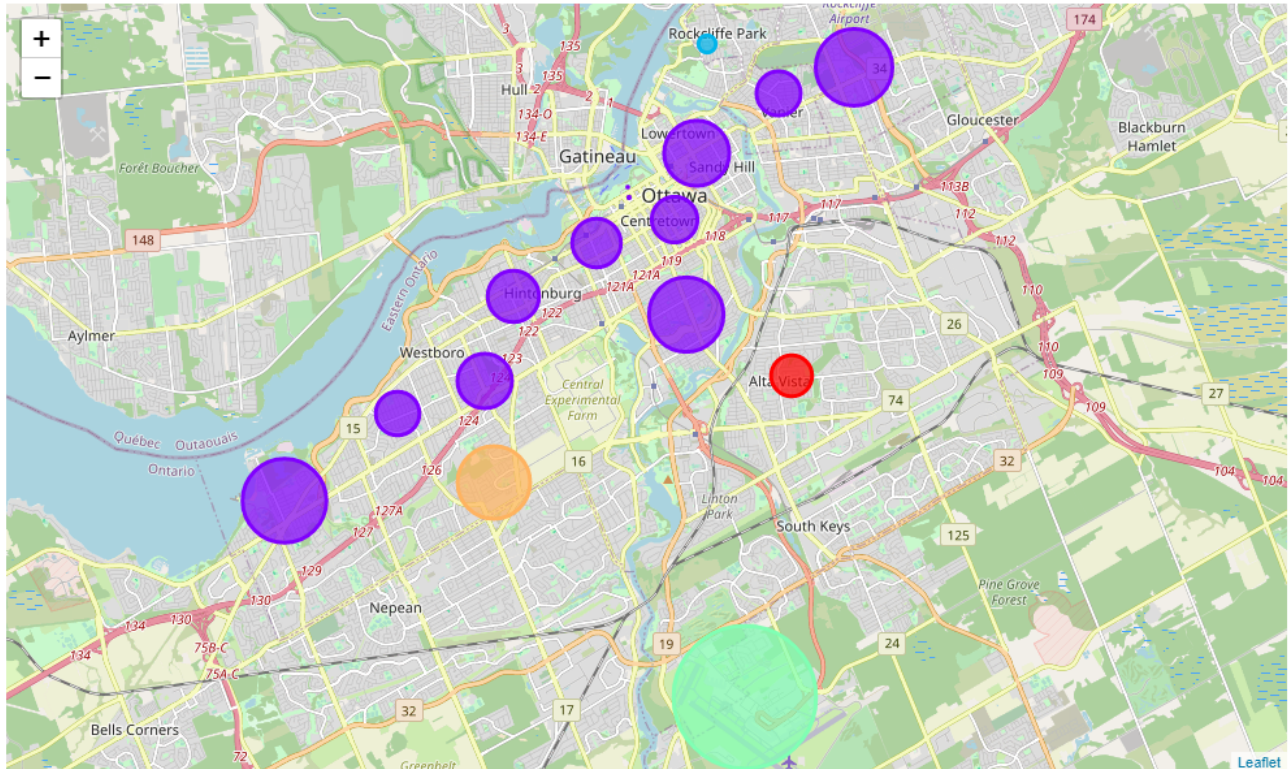
Results and Discussion

After having clustered our venues based on their top 10 venues, and adding in population sizes as sizes of the labels we can see the clusters and the population in those areas clearly.

Our analysis shows cluster 4 has a variety of venues without including fast food restaurants. Looking at the map we can see the density of residential housing and the high population in this area which makes it look like an ideal location for our restaurant. However we have only looked at the available data and it would be a good idea to see the area in person to see if there are other reasons for there being no fast food restaurants in the area. The recommended zone would however be a good starting point for an initial look at suitable buildings.

Conclusion

Since we were looking for areas in Ottawa with high population density, a high number of residential dwellings, and a low number of fast food restaurants. We identified that the boroughs of Queensway / Copeland / Carlington / Carleton Heights as the optimal areas to open a greek fast food restaurant.