

Introduction:

BarBeeQ is an Indian chain of restaurants operating in India at present and it is looking forward to launch an outlet in Toronto, Canada since it has a large Indian population of 78,870. The restaurant is to be opened in area which has lower density of Indian restaurants and is closer to the centre of the city. However, due to cost constraints, the restaurant cannot be set up very close to the city centre. The location has to be selected in such a way that it is also close to the areas majorly populated by Indians. The target audience in this problem would be the owners of the restaurant chain and they would care about it since the solution to the problem will directly have an impact on the cost of establishing a restaurant, its footfall and consequentially its profit.

Data:

The variables crucial for the problem are:

1. Few or no Indian restaurants in the locality
2. The locality should be close both to the city centre and to the areas majorly populated by Indians

The data required for the aforementioned problem will be taken from Foursquare API. It will include:

1. List of Indian restaurants in Toronto
2. Location, distance from the city centre, name of the restaurant, address, zip code.
3. The radius selected is 10 km for finding the restaurants from Toronto city centre

Coordinates of Toronto city centre will be obtained using **Google Maps API geocoding**.

The clustering of restaurants will be done through which a neighbourhood that satisfies the aforementioned variables will be selected. For example: It is found that Scarborough satisfies the variables. Then I will explore Scarborough to find the Indian restaurants present and using the variables, I will find a locality within the neighbourhood where the restaurant can be set up. Further, within the selected neighbourhood, restaurants will be clustered to find a locality that fits the aforementioned variables with even greater accuracy.

