Using Machine Learning to find locations to open an Indian Restaurant

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1 Introduction

1.1 Background

For this Capstone project, I am creating a hypothetical scenario for a concept Indian guy who wants to open an authentic Indian restaurant in Toronto area. The idea behind this project is that there may not be enough Indian restaurants in Toronto and it might present a great opportunity for this entrepreneur who is based in Canada. As Indian food is very popular around the world and is similar to other Asian cuisines, this entrepreneur is thinking of opening this restaurant in locations where Asian food is popular.So,finding the location to open such a restaurant is one of the most important decisions for this entrepreneur.So, I am designing this project to help him find out the most suitable location where he can make good profit out of his business.

1.2 Business Problem

The objective of this capstone project is to find the most suitable location for the entrepreneur to open a new Indian restaurant in Toronto, Canada. By using data science methods and machine learning methods such as clustering, this project aims to provide solutions to answer the business question: In Toronto, if an entrepreneur wants to open an Indian restaurant, where should they consider opening it?

1.3 Target Audience

The entrepreneur who wants to find the location to open authentic Indian restaurant

2 Data

To solve this problem, I will need below data :

- List of neighborhoods in Toronto, Canada.
- Latitude and Longitude of these neighborhoods.
- Venue data related to Asian restaurants. This will help us find the neighborhoods that are most suitable to open an Indian restaurant.

3 Extracting Data

- Scrapping of Toronto neighborhoods via Wikipedia
- Getting Latitude and Longitude data of these neighborhoods via Geocoder package
- Using Foursquare API to get venue data related to these neighborhoods