

Using Machine Learning to find Suitable locations to open an Italian Restaurant

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1.Introduction

1.1 Background

For this Capstone Final Project, I am creating a hypothetical scenario in which an entrepreneur wants to open an Italian restaurant in Toronto. The main idea behind this approach is that this entrepreneur wants to open his restaurant in an area where Italian cuisine is popular so it will be easy to attract customers in that particular area and the restaurant will have a higher probability of success. With this goal in mind, this project has been designed to satisfy the need of the entrepreneur to the utmost extent by finding the most suitable location for him to open his restaurant.

1.2 Business Problem

The main objective of this capstone project is to find the most suitable location by using the techniques and skills acquired from the course such as machine learning, data visualization and data analyzing, fulfilling the aim of this project to provide an answer to the business question: In Toronto, if an entrepreneur wants to open an Italian restaurant, what would be the ideal location?

1.3 target Audience

The entrepreneur who wants to find the suitable location to open an Italian Restaurant.

2.Data

To solve this problem, following data will be required:

- List of neighborhoods in Toronto, Canada.
- Latitude and Longitude of these Neighborhoods.
- Venue Data related to Italian restaurants. This will help us in finding the suitable neighborhood to open the restaurant.

3.Extracting Data

- Scrapping of Toronto neighborhoods via Wikipedia.
- Getting the latitude and longitude data of these neighborhoods using geocoder package.
- Using Foursquare API to get venue data of the neighborhoods.