

Capstone

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Introduction

Opening and running a restaurant is often a challenging endeavour. There are many internal factors (e.g. quality of food, service quality, price etc.) and external factors (location, prominence, competition etc.). This project aims to address the external factors involved in opening a restaurant, particularly the location and competition factor. This project shall examine the hypothetical best location to open a Thai restaurant in Toronto in an effort to perhaps aid future budding entrepreneurs to do so.

Business Problem

An entrepreneur would like to evaluate the best location to open a new Thai restaurant in Toronto. Thai cuisine in foreign countries is often a saturated market and as such it would be important to have the restaurant in an area that has a low concentration of competitor restaurants. This project shall use clustering to determine which areas have relatively low concentrations of Thai restaurants and determine the ideal location to open a new Thai restaurant.

Target Audience

The target audience of this project would be budding entrepreneurs who wish to open Thai restaurants in Toronto.

Data

Requirements:

- List of neighbourhoods in Toronto, Canada
 - Obtained through scraping of Wikipedia
 - This will allow us to rationalise and visualise Toronto as a whole and gain a geographical understanding of the area as well as drill down further using latitude and longitude data. It will also allow us to cluster neighbourhoods together based on similar characteristics.
- Latitude and Longitude of these neighbourhoods
 - Obtained via Geocoder package
 - This will allow us to specifically pinpoint locations within clusters which can serve as suitable grounds for opening a new restaurant.
- Venue information on existing Thai restaurants
 - Obtained using Foursquare API
 - The Foursquare API is a rich source of geolocation information. Numerous variables can be accessed through the Foursquare API such as venue information, tips as well as user information (complete functionality with premium account). For this particular exercise, we

will be most concerned with the category of each venue, particularly Thai restaurants in order to enable us to perform clustering.