

# Using Machine Learning to find locations to open a South Indian Dosa Restaurant

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## 1. Introduction

### 1.1 Background

For this Capstone project, I am creating an imaginary scenario for a concept restaurateur who wants to explore opening an authentic South Indian Dosa restaurant in Toronto area. The idea behind this project is that there may not be enough South Indian Dosa chains in Toronto and it might present a great opportunity for this entrepreneur who is based in Canada. As South Indian Dosa is very comparable to other Asian cuisines, this businessperson is thinking of opening this restaurant in locations Where Asian food is popular (aka many Asian restaurants in the neighbourhood). With the purpose in mind, finding the location to open such a restaurant is one of the most important decisions for this businessperson and I am designing this project to help him find the most appropriate location.

### 1.2 Business Problem

The objective of this capstone project is to find the most suitable location for the businessperson to open a new South 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 a businessperson wants to open a South Indian restaurant, where should they consider opening it?

### 1.3 Target Audience

The businessperson who wants to find the location to open authentic South 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 a South Indian Dosa 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