# Finding best location for new restaurant

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## 1. Introduction

### Background

Toronto is a vibrant multicultural city, it is hard to surprise Torontonians with a new flavour which makes opening an already risky restaurant business even more challenging one. We would like to explore the neighbourhoods in Toronto and the restaurant business in each of them.

### Problem

Data that should help us drive the suggestion would be focused on geographical clustering of the neighbourhoods (we want to go not overly granular but break the city into 10 proximity-based neighborhoods) and the existing venue data.

We would like to analyse what neighbourhoods have best ranked restaurants, with the longest business longevity based on the Foursquare venue data. Splitting this data by price range and cuisine will give us further insights into people's preference in this neighbourhood,

### Interest

Opening a new restaurant is already a high-risk business, with as many as 60% of them failing in the 1st year of opening. [1]    We can help alleviate some of this risk by providing categorized information on restaurants per neighbourhood that will help a prospective restaurateur tailor their business best to the area or select the right spot.

## 2. Data acquisition and cleaning

### 2.1 Data sources

For the data sources we are going to use the Wikipedia list of Toronto neighbourhoods and postal codes, as well as Foursquare API for finding the restaurants in those areas and their features.

### 2.3 Feature selection

by detecting neighbourhood where restaurant business is most popular we are going to use the **Rating** as was ranged by the Foursquare users.

Then for our analysis we are going to focus on following features:

- created At  - to analyse business longevity (high is desirable)
- price         - find the most popular , and average price range in the neighbourhood
- category    - break down into predetermined cuisine buckets to analyze if certain cuisine is more or less popular in this neighbourhoods. As well as detect opportunity (lack of certain type of restaurant)

## 2. References

1) https://www.cnbc.com/2016/01/20/heres-the-real-reason-why-most-restaurants-fail.html#:~:text=Around%2060%20percent%20of%20new,actually%20being%20in%20that%20location.