Capstone Project - The Battle of Neighborhoods

Introduction

The objective of this project is to analyze the cultural makeup of restaurants in Toronto and see how they can be grouped together and classified in different areas.

This report could be useful for people looking to start their own restaurant business and would like to know which areas they would do well in, judging by the surrounding establishments, or figure out what sort of restaurants are desirable in a target area.

Data

The information utilized in this project is made up of two parts:

1. Neighborhood and postal code information that was obtained through Wikipedia, and corresponding geographic coordinates datamined through the Geocoder API
2. Venue data obtained through the Foursquare API

In short, the neighborhood data will be used to query the Foursquare API for all the restaurants within a given radius around the center of each neighborhood. Then it will be clustered together using the K-Nearest Neighbor (KNN) algorithm to classify each neighborhood based on how they compare to others.