Vancouver Grocery

1. Introduction

1.1. Background

From grocery shops customers buy everyday necessities for them and their families.

There's a wide range of products which for each there is a wide range of qualities and as a consequence price.

The task of finding a perfect location for a new retail shop is a very demanding one, let alone for a grocery shop.

There are several methods of finding the perfect spot, starting from the more traditional such as wandering through the roads of some neighborhoods which have been picked up either by chance or based upon some advice of some expert

More advanced method is gathering and studying publicly available data about the neighborhoods in the city of interest. Population, neighborhood demographics, visibility, the amount of traffic that goes by and local competition are all factors taken into consideration This data will be used to study each of the following 3 aspects about what makes a location good for a retail shop (2).

1.2. Problem Description

The board members of our company, FreshGems, have assigned our team to research the best location for our new high-end grocery shop in Vancouver city, Canada. This new shop would help us target customers looking for high quality groceries, harvested according to the latest bio standards.

This is a new hype with many potential customers as people are increasingly aware of the benefits of proper healthy nutrition with bio ingredients. Based on our company's ethics, healthy nutrition should be within the reach of all levels of society, thus the result of our work should be a location where there is a fairly high concentration of retail shops that target the lower half of the market.

2. Solution approach

2.1. Data Requirements

From the 4 aspects that we'll study we derive the following sets of data that will be used during the study:

- Customers: popularity of grocery shops in contrast to supermarkets
- Find out which neighborhoods are high exposure ones
- Popularity of each grocery shop per neighborhood
- Combining all of the above to make a suggestion

2.1.1. Customers

We'll gather data using Foursquare API about the popularity of the grocery shops and the supermarkets in each of the neighborhoods

2.1.2. High exposure streets / neighborhoods

We'll use the K-Means library to cluster the popularity of the neighborhoods based on the popularity of the existing shops

2.1.3. Popularity of groceries per neighborhood

To be able to determine centers of competition we'll study the concentration and popularity of grocery shops within 500m radius