Introduction

Background

Calgary is one of the fastest growing metropolitans in North America mostly because of its oil and gas industry. The city has seen the second highest population growth in Canada and is the second youngest metropolitan in Canada. The city of Calgary has been suffering from economic downturn (mostly because of crude oil price crash) since 2015 but still with one of the highest unemployment rates in Canada, Alberta families earned an average of $72,700 in 2018, about $11,000 more than the national average of $61,400.

Calgary small business account for 95 percent of all businesses, the second highest number of small businesses per capita of the major cities in Canada. According to Statistics Canada, Retail Trade, and Accommodation and Food Services accounts for 8.5 and 5.6 percent of all small businesses in Calgary (Statistics Canada 2019). According to the City of Calgary, in 2019, there has been 1,587 new business licenses issued (a significant decrease from 7,085 in 2018). Every year, in average, between 4 to 5 per cent of businesses decide to relocate.

Motivation and Objective

Calgary has several popular neighborhoods with a high number of retail stores and eateries. Every year, number of new businesses start up in these neighborhoods to take advantage of already existing high demand; however, lack of market and neighborhood research would result in closures or relocation after a year or two. As a result, better research is needed to evaluate the different communities for their business opportunities.

In this report, potential business opportunities have been recommended for several communities based on their similarities in demographics, income, and average property values.

Methodology

Data

Demographic data for this report has been collected from the City of Calgary (https://data.calgary.ca/). Property assessment and values of more than 7 million properties have been collected (also from the City of Calgary) and averaged for each community.

The geojson file for community boundaries has been downloaded from https://data.calgary.ca/ and each community area has been calculated based on the polygon coordinates (to calculate population density for each community).

The median income for each neighborhood has been extracted from great-news.ca (the only available reference for income per neighborhood in Calgary).

All these datasets are combined in one data frame to be used for neighborhoods clustering and determine similar neighborhoods.

Finally, nearby venues for each neighborhood has been called from Foursquare website and sorted in order to determine the type of businesses and frequencies in each community.