

# **Battle of Neighbourhoods: Neighbourhood Analysis of the City of Calgary**

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# **1. Introduction**

## **1.1 Background**

Moving to another city is extremely difficult when you don't know much about the place. Which neighbourhood is the safest? Where are the majority of cafes/restaurants or parks located? Which neighbourhood has the most amount of traffic? Which is the quietest? These are amongst the many questions that cross people's minds when moving to another city. Being well prepared and knowing what to expect can result in a smooth relocation. One of the biggest challenges in this journey is finding a suitable new home that meets a person's interests and expectations.

## **1.2 Business Problem**

Calgary, a city located in western Canada, was ranked the most livable city in North America ("Calgary Facts | Life in Calgary", 2021). This extremely sunny city has diverse communities and endless opportunities. It is no surprise that this gateway to the beautiful Rocky Mountains experiences high population growth. As new families move into this beautiful city, the biggest question that arises is which neighbourhood could they call home? A real estate company has asked us to study the market to help buyers decide which neighbourhoods would better suit their needs and interests. The main task is to analyze neighbourhoods in Calgary using various factors that play into the decision making process such as type of venues/amenities, population density and crime rate. Combined, these data can help buyers/migrants decide which neighbourhood to settle in.

The target audience for this project includes people who are interested in moving to the city of Calgary or those who would like to become homeowners.

# **2.Data**

## **2.1 Data Sources**

Data required for this study was retrieved from the sources listed below.

1. The list of Calgary neighborhoods and their population densities were scraped from a [Wikipedia page](#) using the pandas library method. The following list was then converted into a pandas dataframe.
2. The geographical coordinates of each neighbourhood were extracted using the python GeoPy library. This data was then used to plot the map of Calgary containing markers for each neighbourhood.
3. The Foursquare API was used to obtain data of the top 100 venues that are within a 500m radius from each neighborhood marker.
4. The list of Calgary Neighbourhood crime data for the year 2021 was retrieved from the 'Open Calgary' website using the GET request in HTTP methods.