

Selecting Neighbourhood for New Yoga Studio in Calgary



Introduction

Calgary is vibrant and upcoming big city of Canada with population of 1.3 million. Calgary has young and corporate workforce who are educated and progressive. Yoga scene in Calgary has been very active for past decades. Yoga has been known to not only help body but also mind, it helps in reducing stress and build high self-esteem. Importance of yoga has been growing over time and is apparent all over the world. This report intends to help anyone who intends to start a new yoga studio in Calgary and is looking for a suitable location. The recent pandemic has already put lot of strain on businesses such as yoga studios and many have already closed. Calgary economy has struggled to recover from low oil prices. Calgary job market is stagnant and people have less disposable income to spend. Yoga studios will still have its appeal when life will return to some normalcy post pandemic. It will be a good idea to look to start a yoga studio, but a careful analysis will be needed before selecting a location for a studio.

Business Problem

The objective of this report is to analyses and select best location/neighbourhood for opening a new yoga studio in city of Calgary. The report uses methods of data science and machine learning techniques such as clustering to find top 10 neighbourhoods in Calgary that are suitable for a successful venture of opening a business of yoga studio.

Data Sources and Methodologies

Data needed for this report:

1. Neighbourhood names for city of Calgary along with latitude and longitude
2. Neighbourhood venues data, specially, data related to yoga studios and related businesses

Data Sources:

1. Data for Calgary neighbourhoods are captured from Wikipedia page (https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_T). Data will be captured using web scraping techniques and converted to pandas data frame.
2. Neighbourhoods venue data will be derived from Four Square API. Foursquare API will provide many category related to venue data. Data will be captured using API calls and returned JSON data will be cleaned and converted to Pandas data frame. After required data cleaning, wrangling, machine-learning using K-Means Clustering, and map visualizations using Folium, final report will be generated recommending top 10 neighbourhoods/locations suitable for opening yoga studio in Calgary.