

IBM Data Science Capstone Project

Finding the optimal location for a bubble tea store in City of Calgary

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Introduction

Bubble tea as a new type of beverage consumption, has won its own beverage market over the past ten years, especially among younger generation. It becomes one of the most popular beverage over the world, not only because of the innovative idea of adapting a variety of flavors, but also remaining healthy by using real natural tea as base. In 2019, global bubble tea market was worth USD 2.1 billion, and expecting to reach \$4.3 billion and a compound annual growth rate (CAGR) of 7.8% in 2027.ⁱ

Business Problem

Increasing popularity has attracted many investors to open bubble tea stores in their own city, chained or non-chained. The main purpose of this project is to help investors to find a potential optimal neighbourhood to open a new bubble tea store in City of Calgary. The project is aiming to provide an analysis of population density of the city of Calgary, using Machine Learning methodologies to cluster neighbourhoods, and accessing to Foursquare API to obtain the venues in the neighbourhoods. The recommendation of the optimal location will be made based on analysis of population density, density of restaurant and density of existing bubble stores.

Data Sources:

Following data sources will be used in order to perform the analysis of the project:

- City of Calgary - Community by Sector City of Calgary, which contains the community names in City of Calgary, belonging sectors and corresponding coordinates. (Last Updated: September 11, 2020 <https://data.calgary.ca/Base-Maps/Communities-by-Sector/e6xg-kaxf>)
- A list of top venues in these neighbourhood is acquired using Foursquare API

References:

ⁱ Shankar Bhandalkar, Allied Market Research, <https://www.alliedmarketresearch.com/press-release/bubble-tea-market.html>