Location Based Market Analysis to Identify Optimal Business Location in Colombo District and Suburbs

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Introduction

Background

Colombo is a vibrant and dynamic city and the commercial capital of Sri Lanka with a population of more than 3 million. Colombo is the designated hub for businesses due to the majority of corporations having head offices located and many, a large harbor with strategic positioning along the sea trade routes and an international airport located close to the heart of the city. As the commercial hub of the country, Colombo is seen as a hotspot for identifying new markets, starting new businesses and investment opportunities attracting both local and foreign businessmen and investors.

Business Problem

Selecting the optimal location to perform business operations is essential as it the business gains many opportunities when placed in a location withing close proximity of the target audience and enables the business to easily reach out to current and potential customers and manage logistics efficiently reducing operational costs. Colombo consists of many residential and commercial areas with its own unique blend of venues such as restaurants, supermarkets, consumer stores and service businesses. This makes it challenging for businesses to identify the best location to establish business operations. The project aims to perform unsupervised clustering to effectively identify and cluster similar areas based on the available location data.

Dataset, Features and Preprocessing

Data Sources

The data required for the dataset was collected through three different data sources and compiled into the final dataset. The initial data requirement was to obtain the data related to the suburbs of Colombo which was extracted from the Wikipedia page for Colombo District [1][2]. Then the coordinates of the suburbs would be extracted using the Geocoder Python package [3] and finally the venue details for the coordinates will be extracted using the Foursquare API [4].

Reference

[1] Suburbs of Colombo, Wikipedia: https://en.wikipedia.org/wiki/Category:Suburbs_of_Colombo

[2] Colombo District, Wikipedia: https://en.wikipedia.org/wiki/Colombo_District

[3] Geocoder Python package: https://geocoder.readthedocs.io/index.html

[4] Foursquare API: https://developer.foursquare.com/docs/api-reference/venues/search/