

Coursera Capstone

IBM Applied Data Science Capstone

Opening a New Supermarket in Kuala Lumpur, Malaysia

By: Sahil Aggarwal

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Introduction

A supermarket is self-service shop offering a wide variety of food, beverages and household products, organized into sections. It is larger and has a wider selection than earlier grocery stores, but is smaller and more limited in the range of merchandise than a hypermarket or big-box market.

The supermarket typically has aisles for meat, fresh produce, dairy, and baked goods. Shelf space is also reserved for canned and packaged goods and for various non-food items such as kitchenware, household cleaners, pharmacy products and pet supplies. Some supermarkets also sell other household products that are consumed regularly, such as alcohol (where permitted), medicine, and clothes, and some sell a much wider range of non-food products: DVDs, sporting equipment, board games, and seasonal items.

There has been a rapid transformation of the food sector in developing countries, beginning in the 1990s. This applies particularly to Latin America, South-East Asia, India, China and South Africa. However, growth is being witnessed in nearly all countries. With growth, has come considerable competition and some amount of consolidation. The growth has been driven by increasing affluence and the rise of a middle class; the entry of women into the workforce; with a consequent incentive to seek out easy-to-prepare foods; the growth in the use of refrigerators, making it possible to shop weekly instead of daily; and the growth in car ownership, facilitating journeys to distant stores and purchases of large quantities of goods.

The opportunities presented by this potential have encouraged several European companies to invest in these markets (mainly in Asia) and American companies to invest in Latin America and China. Local companies also entered the market.

They are taking advantage of this trend to build supermarkets to cater to the demand. As a result, there are many supermarkets in the capital city of Malaysia and many more are being built. Opening supermarkets allows property developers to earn consistent rental income. Of course, as with any business decision, opening a new supermarket requires serious consideration and is a lot more complicated than it seems. Particularly, the location of the supermarkets is one of the most important decisions that will determine whether the mall will be a success or a failure.

Business Problem

The objective of this capstone project is to analyse and select the best locations in the city of Kuala Lumpur, Malaysia to open a new Supermarket. Using data science methodology and machine learning techniques like clustering, this project aims to provide solutions to answer the business question: In the city of Kuala Lumpur, Malaysia, if an organization is looking to open a new supermarket, where would you recommend that they open it?

Target Audience of this project

This project is particularly useful to investors looking to open or invest in new supermarkets in the capital city of Malaysia i.e. Kuala Lumpur. This project is timely as the city is currently suffering from oversupply of supermarkets. There are places where there are a huge number of supermarkets within 2-4 Kilo meters from residential places and then there are some residential places where one has to travel a lot to reach a good supermarket.