

STRATEGIC

BRANCH

ESTABLISHMENT:

Establishing a New Coffee Shop

Branch in Yogyakarta, Indonesia

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Date Created : June, 17th 2021

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Preface

Indonesia and coffee has close relationship among each other, where as Indonesia is holding the title of fourth largest coffee producer in the world and Indonesia hold the seventh position title as the world largest coffee consumer bringing supply and demand for coffee in the country has important role on its economy's growth. In other words, both of the facts tell us explicitly that coffee has great value to Indonesian businesses and economy in many ways of business point of view.

Coffee as business idea yielding vast amount of business type, broad of product variety and business model, scalable business valuation and/or organization size, and vast target consumer and/or market. In fact, Indonesian Ministry of Industry release a publication that said even though amid coronavirus global pandemic impact, coffee related business trade balance still made a surplus of USD 211.05 million in 2020 first semester.

Indonesia in the era of digital transformation has impact on shaping business behavior due to people higher literation on technology. Businesses are likely to thrive in when using agile and intelligent strategy on their decision making processes. One of the most case of making decision is 'where to establish the business operation?', based on the case stated in prior sentence this publication will elaborate and demonstrate the process of decision making based on data.

Introduction

1.1 Background

Establishing a business capital is not an easy task to do for every stakeholders in any business size and there are lot of things to consider and decision to be made in this process. One of the major problem arise from is ‘where do the place that suit best?’.

Choosing a business spot is an initial step to businesses operation apart from concepting business model and business operation planning. When choosing an establishment spot we might consider potential benefit or potential risk in the future.

1.2 Business Problem

This research is an attempt to find a strategic place to establish a coffee shop within Yogyakarta, Indonesia. This section will discuss the business problems that will shape the research direction and scope, therefore below will point out the business problem that occurred.

- a) Want to establish a coffee shop somewhere in Yogyakarta
- b) Provide establishment location option in village level
- c) Preferably presented in geological map
- d) Target customers are college university students and office workers
- e) Success criteria : locations with lowest competitors and highest potential customers
- f) Based on domain knowledge, working place and college university mainly available in two main regency : Sleman and Kota Yogyakarta
- g) Cannot afford third party data vendor
- h) The data required might be scattered somewhere in open public
- i) To reach highest potential customers, the location should be near to working places (office) and college universities
- j) To reach lowest competitors potential, the location should have least coffee shop nearby

Analytics approach conducted in this research:

- a) Geospatial analysis and visualization
- b) Unsupervised task: Clustering

2.1 Data Understanding

Based on the business problem stated in prior section; location point of interest in this research will be the regions of Yogyakarta and its subdistrict and village. Therefore to generate geo visualization format, geo coordinate information is needed such as latitude and longitude of a particular location. Since no data provided at the first time, external sources needed to gather all data requirements. One of the external sources for data gathering is foursquare places API an open-source with the sandbox free tier services and Nominatim openstreetmap geocoders. Data requested from the API using version updated on July, 1st 2020.

2.2 Data Requirements

Data required to conduct research:

- a. Yogyakarta's subdistricts name
- b. Yogyakarta's villages
- c. College universities in Yogyakarta
- d. Office buildings in Yogyakarta
- e. Coffee shop establishments in Yogyakarta
- f. Geo location (latitude,longitude) from above data

2.3 Data Collection

Web scraping sources:

- a. <https://kependudukan.jogjaprov.go.id/statistik/penduduk/jumlahpenduduk/15/0/00/01/34.ez>
- b. <https://kependudukan.jogjaprov.go.id/statistik/penduduk/jumlahpenduduk/15/0/00/02/34.ez>
- c. <https://kependudukan.jogjaprov.go.id/statistik/penduduk/jumlahpenduduk/15/0/00/03/34.ez>
- d. <https://kependudukan.jogjaprov.go.id/statistik/penduduk/jumlahpenduduk/15/0/00/04/34.ez>
- e. https://id.wikipedia.org/wiki/Daftar_kapanewon,_kemantren,_kalurahan,_dan_kelurahan_di_Daerah_Istimewa_Yogyakarta
- f. <https://kependudukan.jogjaprov.go.id/statistik/penduduk/jumlahpenduduk/15/0/00/71/34.ez>

data from web scraping source containing informations of Yogyakarta subdistricts and villages name.

Nominatim-Openstreetmap requests:

- a. Using geopy.Nominatim python package to get geo coordinate of a location. With this python package, latitude and longitude of Yogyakarta's subdistricts and villages are retrieved.

Foursquare API requests:

- a. <https://api.foursquare.com/v2/venues/explore>

parameters:

- Client id
- Client secret
- Radius = 700 meters
- ll (latitude, longitude)
- version = 20200701
- limit =100
- q (query) = College%20%26%20University
- categoryId (college places) = 4d4b7105d754a06372d81259
- categoryId (office places) = 4bf58dd8d48988d124941735
- categoryId (coffee shop venues) = 4bf58dd8d48988d1e0931735

with foursquare API request, data containing coffee shop venues, college universities, and office buildings are retrieved. The format the data retrieved is JSON (Javascript Object Notation) containing geo coordinate of a venues, list of nearby venues, and other informations.