

## Exploring the Potential Area for a new coffee shop

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### 1. Introduction

#### 1.1 Background:

The coffee shop company has established several coffee shops around Ho Chi Minh city in several places, both central and outskirt areas of the city.

#### 1.2 Problem:

The company considers establishing some new stores in 2020 with the objective to expand the presence of the company coffee brand, as well as contribute to the total company revenue in the future.

Given the need of choosing the right location to attract as many consumers as possible and enhance the brand awareness, the business stakeholders want know **Which location to build the new cafes in Ho Chi Minh city** in order to attract as many customers as possible.

An understanding of existing location will help making the decision and after discussion with the management team, strategic planning, data scientist teams came out with the following hypothesis of the popular cafe shop location.

- Places surrounded by shopping street, cinema, entertainment spots.
- Not located near other refreshment facilities such as café, restaurants, etc...

My job is to confirm the above hypothesis and suggest more detailed of which locations to move forward.

### 2. Data

#### 2.1 List of chain store

List of chain store is taken from the website with address, latitude and longitude information.

The dataset is as below:

	Address	Latitude	Longitude
0	159 Pham Ngu Lao	10.768944	106.694432
1	141 Nguyen Thai Binh	10.768249	106.698897
2	47-49 Le Thi Rieng	10.771258	106.691517
3	180 Tran Quang Khai	10.791873	106.689762
4	572 Ba Thang Hai	10.766510	106.664095
5	798 Su Van Hanh	10.774309	106.668464
6	175B Cao Thang	10.775067	106.675587
7	25A Dong Nai	10.780824	106.661750
8	359 Do Xuan Hop	10.821463	106.772440
9	Lo T2-1.2, D1	10.851567	106.797499
10	400A Huynh Tan Phat	10.747211	106.728943
11	313 Nguyen Thi Thap	10.738426	106.715246

## 2.2 Surrounding facility:

Surrounding facility information will be taken from Foursquare API data.

These 2 datasets will then be joined together for further analysis

## 3. Methodology

Surrounding facilities will be chosen within 500 meters away from the targeted location and limit to 20 places.

Joined dataset will be look like this:

	Address	Latitude	Longitude	VenueName	VenueLatitude	VenueLongitude	VenueCategory
0	159 Pham Ngu Lao	10.768944	106.694432	Saigon Ink Tattoo	10.767279	106.694758	Tattoo Parlor
1	159 Pham Ngu Lao	10.768944	106.694432	Asiana Food Town @ The Sense Market	10.769282	106.693399	Food Court
2	159 Pham Ngu Lao	10.768944	106.694432	Five Boy Number One	10.767148	106.693257	Juice Bar
3	159 Pham Ngu Lao	10.768944	106.694432	New World Saigon Hotel	10.770545	106.695183	Hotel
4	159 Pham Ngu Lao	10.768944	106.694432	Beautiful Spa	10.767098	106.693534	Massage Studio

This represents the other venues around the targeted café as well as the Venue Category.

From the Venue category, we can understand which category should be together.

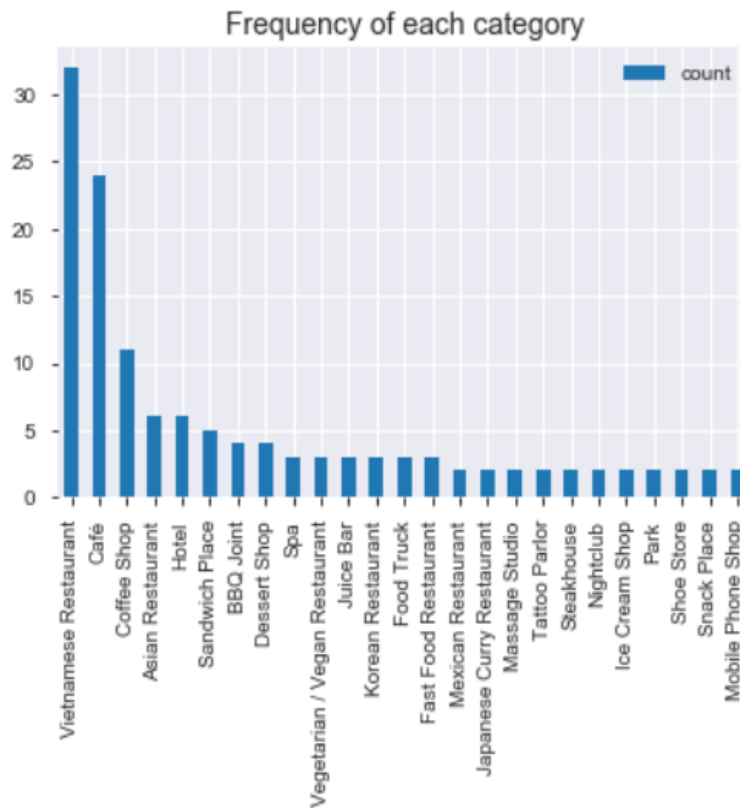
Then, I conduct Exploratory analysis to understand which type of venue category associates with each café location, which type of venue appears more than others

#### 4. Result

Half of the stores within the chain has 20 other facilities surrounded, while there are 4 café have only 4 to 6 venues around.

Address	Latitude
141 Nguyen Thai Binh	20
159 Pham Ngu Lao	20
175B Cao Thang	20
180 Tran Quang Khai	20
25A Dong Nai	18
313 Nguyen Thi Thap	6
359 Do Xuan Hop	6
400A Huynh Tan Phat	3
47-49 Le Thi Rieng	20
572 Ba Thang Hai	14
798 Su Van Hanh	20
Lo T2-1.2, D1	4

There are 50 different categories within the list and the most appeared categories are Vietnamese Restaurant (32 times), Café (24 times), Coffee shop (11 times), Asian Restaurant and Hotel (6 times).



It is obvious that restaurants and Café/Coffee shops are being built next to each other.

## 5. Discussion

One of the biggest observations from the analysis is that, compared to the hypothesis of the company's stakeholders, which expected a café shop should be built among entertainment facilities such as cinema, park, or malls, the observation shows an opposite.

The current company's stores are being surrounded by other relatively same category venues such as restaurants, other café/coffee shops.

These company's locations are considered as healthy performance locations so somehow, we can conclude that building a new café within the ecosystem of other restaurants and café shops might be a plus for the company's performance.

## 6. Conclusion

In this study, I conducted an analysis on exploring the characteristics of current company's café locations and make recommendations on the future potential new locations for a new café.

I identified the surrounding venues, breaking by venue category, made a short exploratory analysis to answer the stakeholder questions regarding the characteristics of a healthy café venues. The analysis focused on exploring the frequency of venue category while have not touched to the relationship of the venue category with the store's performance (i.e. revenue). The revenue data will help quantify the relationship of a healthy venues with its surrounding and it will contribute well to the further analysis.