

Open a Kitchen Supply Store in Penang, Malaysia

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Business Problem

The location to open a shop will determine whether this shop will success or fail to get enough customers and whether there is strong competition from the same type of shop.

Business Questions

If a business owner is looking to open a kitchen supply store in Penang, where would you recommend them to open it?

Project Objective

Objective

To analyze and select the best location in the Penang to open a new kitchen supply store.

Target Audience

Business owners who are looking to open a new kitchen supply store in Penang.

Data

Data required

- A list of neighborhoods in Penang
- Latitude and longitude coordinates of the neighborhoods
- Food venues data & kitchen supply shops data (including supermarket that also sell kitchen supplies)

Sources of data

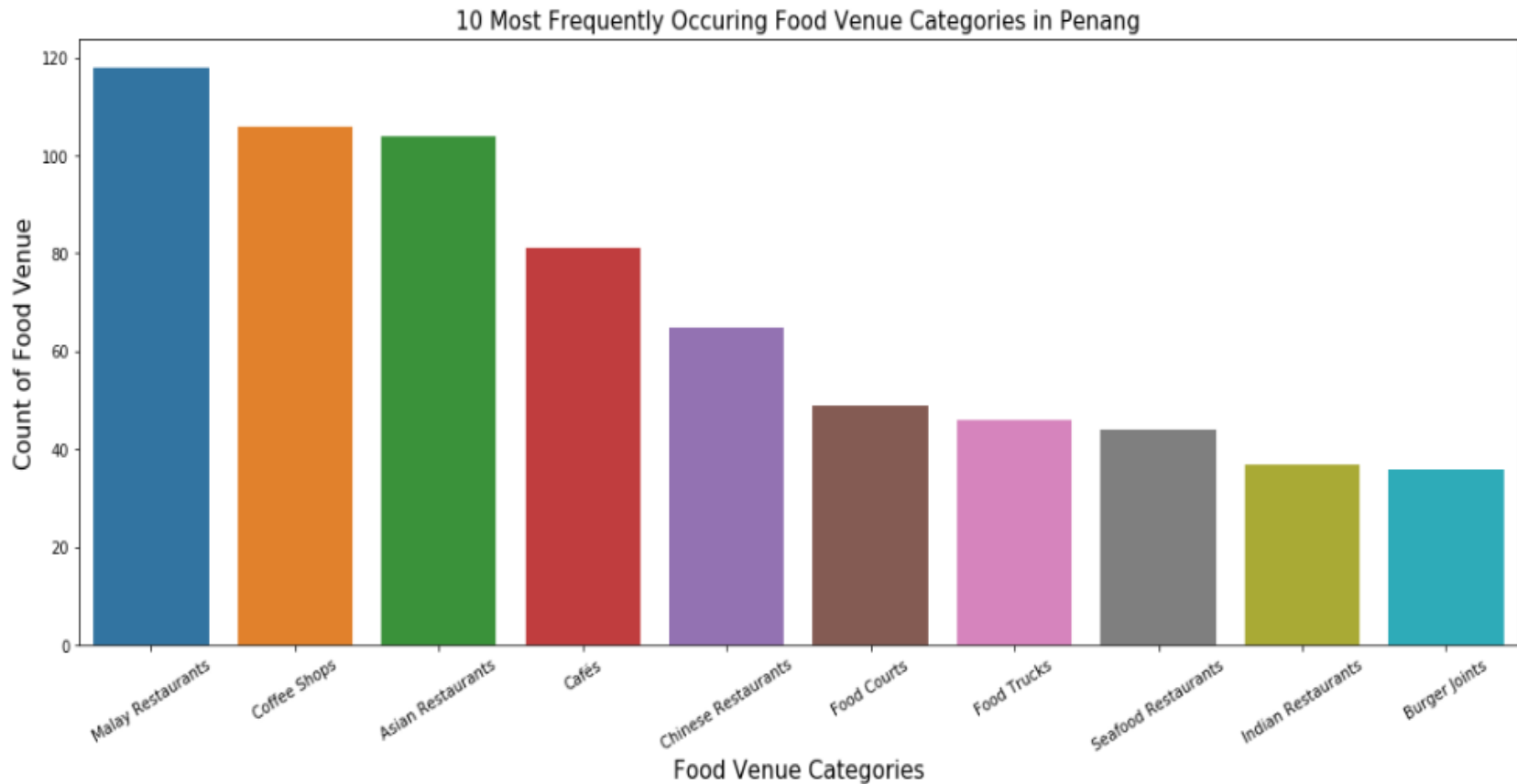
- Wikipedia page for neighborhoods
(https://en.wikipedia.org/wiki/Category:Districts_of_Penang)
- Geocoder package for latitude and longitude coordinates
- Foursquare API for venue data, Folium package to plot map
- Google Search and Google Map for additional kitchen supply shops

Methodology

- Web scraping Wikipedia page for Penang neighborhoods list
- Get latitude and longitude coordinates for neighborhoods using Geocoder
- Use Foursquare API to get food venue & kitchen supply stores data
- Use Google Search and Google Map to search additional kitchen supply stores and use Geocoder to find their latitude and longitude coordinates. Each shop is assigned to the nearest neighborhood.
- Use Folium package to plot the location of all food venues and kitchen supply stores.
- Calculate the average food venues served by one kitchen supply store for each neighborhood.

Results

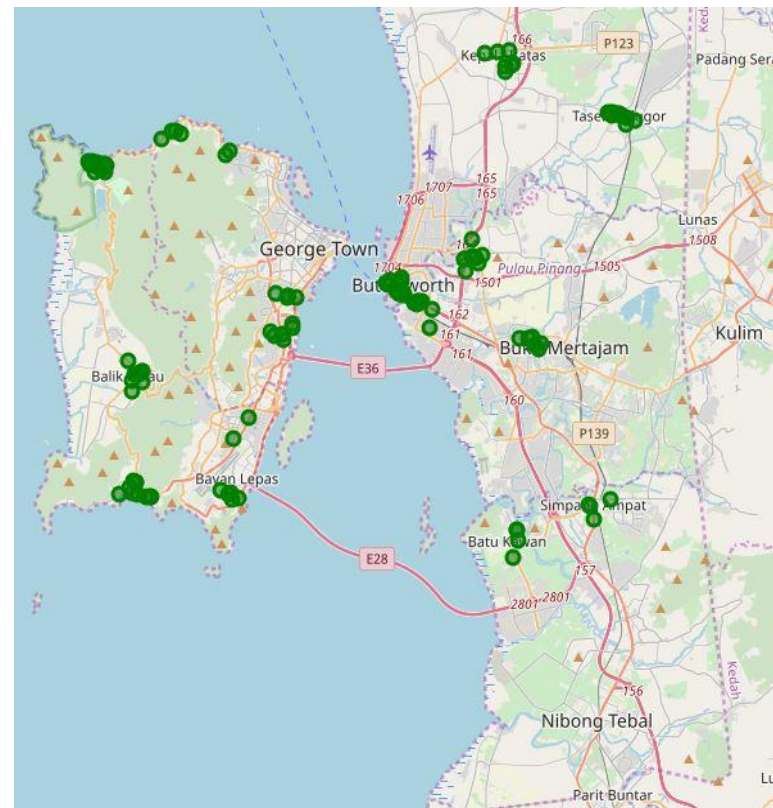
Top 10 Most Common Food Venue Categories



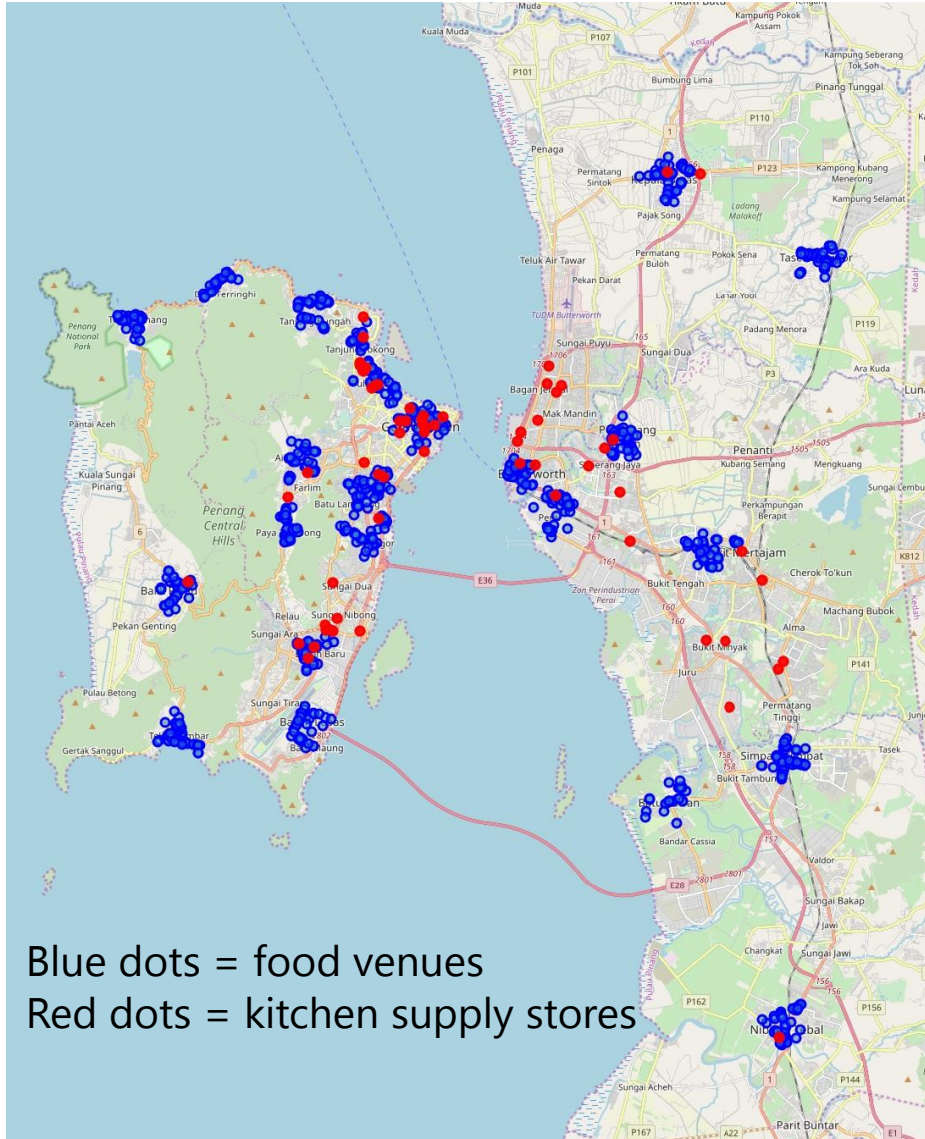
Results

Top 10 Malay Restaurants Locations

	Count
Teluk Bahang	16
Tasek Gelugor	11
Butterworth	10
Teluk Kumbang	10
Balik Pulau	9
Perai	8
Permatang Pauh	8
Gelugor	7
Kepala Batas	7
Bukit Mertajam	6



Results: Average Food Venues served by One Kitchen Supply Store



	FoodVenueCount	CompetitorCount	AvgFoodVenue
Neighborhood			
Bayan Lepas	50	NaN	NaN
Batu Lanchang	49	NaN	NaN
Tanjung Bungah	49	NaN	NaN
Teluk Bahang	49	NaN	NaN
Batu Ferringhi	48	NaN	NaN
Teluk Kumbar	48	NaN	NaN
Tasek Gelugor	46	NaN	NaN
Batu Kawan	29	NaN	NaN
Air Itam	50	1.0	50.00
Gelugor	49	1.0	49.00
Nibong Tebal	49	1.0	49.00
Balik Pulau	48	1.0	48.00
Perai	48	1.0	48.00
Paya Terubong	47	1.0	47.00
Kepala Batas	48	2.0	24.00
Simpang Ampat	48	3.0	16.00
Bukit Mertajam	49	5.0	9.80
Butterworth	47	5.0	9.40
Tanjung Tokong	31	4.0	7.75
Jelutong	30	4.0	7.50
Pulau Tikus	47	7.0	6.71
Permatang Pauh	49	8.0	6.12
Bayan Baru	46	9.0	5.11
George Town	47	12.0	3.92

Discussion & Recommendations

There is no kitchen supply store in the following neighborhoods:

- Bayan Lepas
- Batu Lanchang
- Tanjung Bungah
- Teluk Bahang
- Batu Ferringhi
- Teluk Kumbar
- Tasek Gelugor
- Batu Kawan

This area has the potential to open a kitchen supply store.

Discussion & Recommendations

Based on the map of food venues and kitchen supply stores, it is recommended to open a kitchen supply stores in the following neighborhoods:

- Tanjung Bungah and Batu Ferringhi
- Gelugor and Batu Lanchang
- Air Itam and Paya Terubong
- Bayan Lepas
- Balik Pulau
- Tasek Gelugor
- Perai and Bukit Mertajam
- Simpang Ampat
- Nibong Tebal

These neighborhoods have many food venues with 1 or 0 kitchen supply store.

Discussion & Recommendations

Information to find out before opening a kitchen supply store in the selected neighborhood:

- How good is the business of the food venues?
- What is the shop monthly rental or selling price?
- Are there any other kitchen supply stores that are not listed in Foursquare database or out of the area of study (more than 1km away from the neighborhood)?
- How big is the kitchen supply store in the neighborhood, what kind of kitchen utensil and dining supplies are sold by them? How good are their business?

Discussion & Recommendations

If the business owner decides to open a shop to supply raw materials of food, the potential foods to supply are

- Halal foods for Malay restaurants
- Coffee powder, drinks for coffee shops
- Pork, beef, chicken meat, vegetables, noodle for Asian Restaurants

This suggestions are based on the top 10 most common food venue categories in Penang.

Discussion & Recommendations

The business owner also need to find out the number of venues/shops that also sell the raw material of foods in the selected neighborhood:

- Morning markets (Fish and Farmer Market)
- Night markets (Market at neighborhood)
- Supermarkets
- Grocery shops

These venues/shops are the competitors to the business owner who sell raw material of foods.

Conclusions

Findings of this project will help the business owner to grab the best opportunities on high potential locations to open a kitchen supply store while avoiding large competition areas.