

# The Chinese Restaurants Battle in Hong Kong

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APPLIED DATA SCIENCE CAPSTONE – COURSE WORK (WEEK 5)

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# Introduction

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Hong Kong is a good places with many languages and restaurants

- Mixture of cultures – Chinese and western
- 7.5 million people in a small place

Great investment to start a restaurant in Hong Kong?

- Chinese restaurants are popular
  - Appealing dishes
  - Fresh ingredients

# Business Problem

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To find out the optimum place in Hong Kong to open a new Chinese restaurant

- Investor perspectives:
  - What places are good to have new restaurants?
  - Where to set up a restaurant with similar dishes around the districts?
    - Build the reputation easily
- General Public perspectives:
  - Where to have Chinese food in Hong Kong?
  - What kind of rating we expect to have the experience in those restaurants?

# Problem Statement

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1. Where are the best districts for Chinese cuisine in Hong Kong?
2. In districts should the investor open a Chinese restaurant to have the best chance of being successful?
3. Where can we go in Hong Kong to have the best Chinese food?

# Data

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To solve the business problem, the following data is required for analysis.

The data of Hong Kong containing the districts name

Latitude and Longitude coordinates of those districts

Venue places with the information of location, name, categories

# Methodology

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- Firstly, the data will be collected from <https://www.geodatos.net/en/coordinates/hong-kong> and cleaned for the later process.
- Then FourSquares will be used to locate the venues in those districts. Then the number and frequencies of restaurant types will be recorded and summarized into the data frame.
- Data will be sorted based on rankings. At the end, the data will be visually visualized by the graphics using the Python libraries.

# Data acquisition and cleaning

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Districts, geographical coordinates from [www.geodatos.net](http://www.geodatos.net)

In total, there are 17 rows and 2 columns in the raw dataset.

We split the coordinates column by the delimiter and turned into Longitude and Latitude.

Cleaned data contains 3 columns (Districts, Longitude and Latitude).

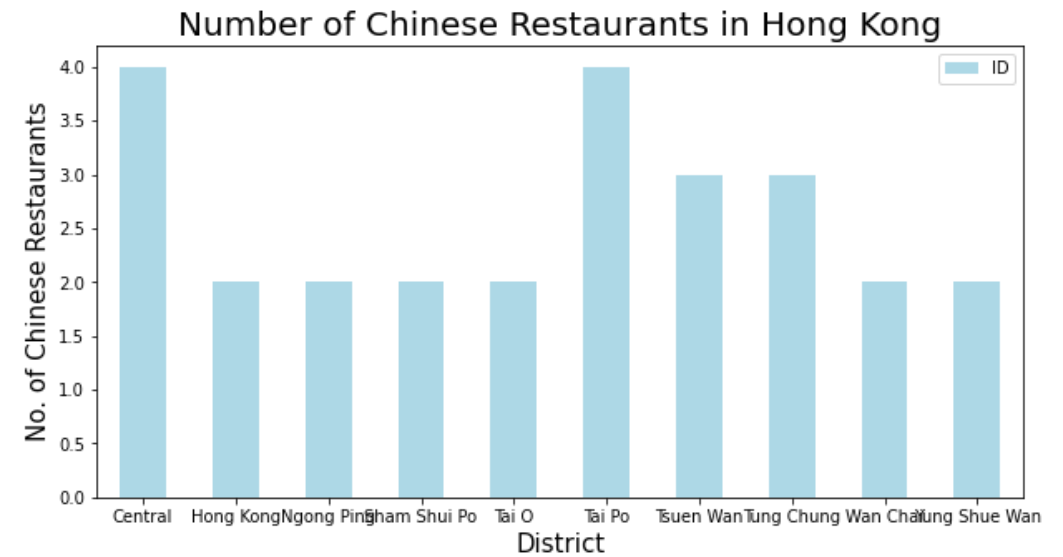
Then we obtain the venues of neighborhood from Foursquares and details of 26 Chinese restaurants are obtained.



# Result

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The number of Chinese restaurants in Central and Tai Po ranked the highest among the districts in Hong Kong.



# Result

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From Foursquares, we can obtain the id, name and comments(Like, Rating and Tips from the customers). Then we can utilize these information to useful insight.

	City	ID	Name	Likes	Rating	Tips
21	Central	4b91df7ef964a520eedc33e3	Cuisine Cuisine (國金軒)	41	7.2	20
22	Wan Chai	4b0588d8f964a520d5dc22e3	One Harbour Road (港灣壹號)	40	8.7	17
23	Wan Chai	4b67b864f964a520f15b2be3	Liu Yuan Pavilion (留園雅敘)	35	8.2	24
24	Sham Shui Po	4cda99864006a14382a4d2b2	Shia Wong Hip (蛇王協)	10	7.5	8
25	Sham Shui Po	50dd8548e4b021301ef05370	利星海鮮小炒火鍋	4	6.2	1

# Result

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After categorizing different restaurants with rating into their own districts, it is found that Central and Wan Chai have the highest rating of Chinese restaurants in Hong Kong in average.

The average rating of these two districts almost approaches 8.



# Result

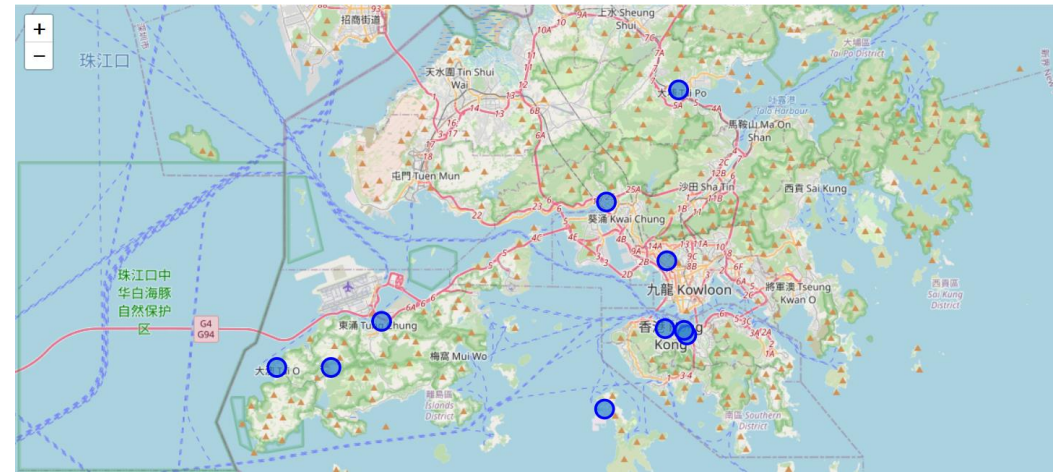
Then we merge the tables into a new data frame with more information.

This would help us to draw the interactive map for audience to look for Chinese restaurants in Hong Kong.

	City	ID	Name	Likes	Rating	Tips	Coordinates	Latitude	Longitude
0	Hong Kong	4b67b864f964a520f15b2be3	Liu Yuan Pavilion (留園雅敘)	35.0	8.2	24.0	22.27832, 114.17469	22.27832	114.17469
1	Hong Kong	4bb2cdfb715eef3b41bf85bb	Trusty Congee King (靠得住粥麵小館)	30.0	7.5	17.0	22.27832, 114.17469	22.27832	114.17469
2	Tsuen Wan	4d400e3789616dcb823f00b5	Nice Capital Restaurant (麗都饕客)	6.0	6.6	2.0	22.37137, 114.11329	22.37137	114.11329
3	Tsuen Wan	4be40308b02ec9b684c450c0	Sportful Garden Restaurant (陶源酒家)	6.0	6.2	4.0	22.37137, 114.11329	22.37137	114.11329
4	Tsuen Wan	4e33f15062e1733d7aa708c4	The Great Restaurant (一品雞煲火鍋)	13.0	6.2	3.0	22.37137, 114.11329	22.37137	114.11329
5	Tung Chung	4d16c7aab15cb1f737efaf21	Super Super 一粥麵	7.0	5.6	0.0	22.28783, 113.94243	22.28783	113.94243
6	Tung Chung	4c936bcd1221b1f768cf19e2	Federal Palace (聯邦皇宮)	36.0	5.6	22.0	22.28783, 113.94243	22.28783	113.94243
7	Tai Po	4e89b10d6c25bf8636514f83	China House (家傳滬曉)	4.0	6.2	5.0	22.45007, 114.16877	22.45007	114.16877
8	Tai Po	4bf0eb5fb315c9b6c97f93ff	Kwan Kee (群記清湯腩)	7.0	6.1	11.0	22.45007, 114.16877	22.45007	114.16877
9	Yung Shue Wan	4bc307e84cdfc9b613be9621	Lung Kong Restaurant (龍江川粵菜館)	6.0	5.8	10.0	22.22623, 114.11241	22.22623	114.11241
10	Yung Shue Wan	4d4007211bd2a143b884ee7c	榮記小食	4.0	5.8	5.0	22.22623, 114.11241	22.22623	114.11241
11	Ngong Ping	4c1b0402eac020a1f74744c2	Ngong Ping Garden Restaurant (昂坪膳坊)	22.0	5.9	8.0	22.25556, 113.90391	22.25556	113.90391
12	Tai O	4cba94d4f50e224b6fecf4fb	Fook Moon Lam Restaurant (福滿林酒樓)	4.0	5.8	2.0	22.25515, 113.86309	22.25515	113.86309

# Result

The blue dots are the districts with the average rating label. The users can easily check out the rating of different districts if they would like to visit specific districts.



# Limitation

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The above analysis is based on the limited resources and data from Foursquares, which is not fully explaining the distribution and performance of restaurants in Hong Kong.

The accuracy of data from Foursquares would determine the value of this analysis. It is recommended to have a comprehensive research and analysis with more data from external databases.

# Discussion and Conclusion

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In Hong Kong, Central and Wan Chai has relative high-rate Chinese restaurants in average. Duddell's (都爹利會館) and One Harbour Road (港灣壹號) obtains the highest number of likes and rating among the restaurants in Hong Kong, according to the database of Foursquares.

To summarize, it would be great to have a visit to **Central** and **Wan chai** for good Chinese restaurants.

As an investor, it would be a bit risky and competitive to start a Chinese restaurants in Central and Wan Chai without any experience. To have the best shot of success, it is suggested to open a Chinese restaurant in **Tsuen Wan** or **Sham Shui Po**. These districts have neighbourhoods with average ratings exceeding 6.0 and less Chinese restaurants than Central and Wan chai, making competition easier.

Thank you

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