

Capstone Project - The Battle of Neighborhoods | Search for Chinese Restaurants

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August 19th, 2020

1. Introduction

A Chinese restaurant is an establishment that serves a Chinese cuisine.

Chinese cuisine is an important part of Chinese culture, which includes cuisine originating from the diverse regions of China, as well as from Overseas Chinese who have settled in other parts of the world. Chinese food staples such as rice, dumpling, noodles, tea, and tofu, and utensils such as chopsticks and the wok, can now be found worldwide.

Many people including myself, love Chinese food, and always search for Chinese restaurants when traveling. However, Chinese cuisine is so diverse. The eight major traditions of Chinese cuisine are: Shandong cuisine, Sichuan cuisine, Cantonese cuisine, Fujian cuisine, Jiangsu cuisine, Zhejiang cuisine, Hunan cuisine, Anhui cuisine. Let alone other traditional cuisine. In Foursquare, there are also Chinese restaurants belonging to different categories, such as dim sum restaurant, dumpling restaurant, etc.

Therefore, if simply search for "Chinese restaurants", there will be some restaurants that actually belong to Chinese cuisine being left out. Also, some Foursquare data lack address or postalCode, which is essential for restaurant information.

So, the purpose of this project is to get all, at least most, Chinese restaurants' name, address and postalCode worldwide, for those who want to search for or provide others with Chinese restaurants information around a specific place.

2. Data section

- **Coordinates data**

Source: use geopy to get coordinates data. <https://geopy.readthedocs.io/en/stable/>

Description: Includes searching places' and restaurants' latitude, longitude, address, etc. Latitude and longitude can be used to get the postalCode and address for desired places; postalCode and address are part of Chinese restaurant information data provided for the final product, also for visualizing choropleth map.

- **Restaurants data**

Source: Foursquare API

<https://developer.foursquare.com/docs/api-reference/venues/search/>

Description: use Foursquare API to search for restaurants around a location, such as name, category, address, postalCode, etc. Then filter the data to get only clean Chinese restaurants information.

3. Methodology section

This section represents the main component of the report where the data is gathered, prepared for analysis and mapping.

Approach

- Use geopy library to get the latitude and longitude values of locations.
- Use Foursquare API to search all restaurants around a location.
- Clean the json and structure it into a pandas dataframe.
- Get all Chinese restaurants categories, which includes:
 - Create a list to include all Chinese restaurants categories in Foursquare.
 - Use geopy library to replace NaN values in 'postalCode' and 'address' columns.
 - Select columns most related to the audience for final display.
- Use Folium to Create a map of restaurants with name superimposed on top.

Methodology Execution

The json Data gathered from Foursquare API was cleaned and structured into *pandas* dataframe. Information like 'name', 'categories', 'location.address', 'location.distance', 'location.postalCode',

'location.lat', 'location.lng' were selected, also, 'categories' was filtered to get only the 'categories.name'.

from json file:

```
{'meta': {'code': 200, 'requestId': '5f3ccd71f26cab155cbb4f54'},
  'response': {'venues': [{ 'id': '4aa8416bf964a5206c5020e3',
    'name': 'Traxx Restaurant',
    'location': { 'address': '800 N Alameda St',
      'crossStreet': 'in Union Station, along main corridor',
      'lat': 34.056232294401845,
      'lng': -118.23618342008349,
      'labeledLatLngs': [{ 'label': 'display',
        'lat': 34.056232294401845,
        'lng': -118.23618342008349}],
      'distance': 669,
      'postalCode': '90012',
      'cc': 'US',
      'city': 'Los Angeles',
      'state': 'CA',
      'country': 'United States',
      'formattedAddress': ['800 N Alameda St (in Union Station, along main corridor)',
        'Los Angeles, CA 90012',
        'United States']},
    'categories': [{ 'id': '4bf58dd8d48988d157941735',
      'name': 'New American Restaurant',
      'pluralName': 'New American Restaurants',
      'shortName': 'New American',
      'icon': { 'prefix': 'https://ss3.4sqi.net/img/categories_v2/food/newamerican_',
        'suffix': '.png'},
      'primary': True}],
    'venuePage': { 'id': '89373347'},
    'referralId': 'v-1597820453',
    'hasPerk': False},
```

to dataframe:

	name	categories	address	distance	postalCode	lat	lng
0	Traxx Restaurant	New American Restaurant	800 N Alameda St	669	90012	34.056232	-118.236183
1	Mayflower Seafood Restaurant	Seafood Restaurant	679 N Spring St	782	90012	34.059582	-118.238129
2	Noe Restaurant & Bar	French Restaurant	251 S Olive St	771	90012	34.052290	-118.250963
3	24/7 Restaurant at The Standard, Downtown LA	American Restaurant	550 S Flower St	1344	90071	34.049743	-118.256548
4	Restaurant Guerrero	Mexican Restaurant	320 W 8th St	1590	90014	34.044159	-118.255615
5	Full House Seafood Restaurant	Chinese Restaurant	963 N Hill St	1457	90012	34.066155	-118.237916
6	Yang Chow Restaurant	Chinese Restaurant	819 N Broadway	1115	90012	34.062926	-118.238059
7	Amante Restaurant	Italian Restaurant	123 E 9th St	1761	90015	34.041191	-118.254481
8	Trimana Restaurant	Salad Place	633 W 5th St.	1171	90071	34.050811	-118.254983
9	Wok Inn Restaurant	Asian Restaurant	201 N Los Angeles St Ste 102	116	90012	34.054317	-118.241752
10	Restaurant Atitlan	Latin American Restaurant	1614 W 6th St	2529	90017	34.057095	-118.269879
11	Doña Vicky's Restaurant	Mexican Restaurant	1263 W 2nd St	1563	90026	34.060190	-118.257793
12	Matsu Japanese Restaurant	Sushi Restaurant	1267 W Temple St	1739	90026	34.066298	-118.253917
13	Lelit Restaurant	Mediterranean Restaurant	109 E 9th St	1748	90015	34.041388	-118.254555
14	Gill's Indian Restaurant ORDER FOOD ONLINE	Indian Restaurant	838 S Grand Ave	1761	90017	34.044647	-118.258433
15	La Guadalupana Restaurant	Mexican Restaurant	ldk	182	90012	34.052236	-118.243683

Then, I noticed that when searching “restaurant”, some 'categories' like ‘Salad Place’, ‘Other Nightlife’, ‘Food’, ‘Breakfast Spot’ were included in the column, since this project focuses on ‘restaurant’, those categories were removed from the dataframe.

Several methods were used to gather all Chinese restaurants categories:

- First, the “**chinese_restaurants_list**” was created to include other categories that didn't list as 'Chinese Restaurant' in Foursquare.
- Second, some categories obtained from running testing locations, such as 'Dim Sum Restaurant', 'Hotpot Restaurant', 'Peking Duck Restaurant', 'Dumpling Restaurant', etc. were added to the list.
Apparently, there's a big chance 'Asian Restaurant' will serve chinese food, but it could also be Japanese or Korean restaurant. For this project, I'll keep this category.
- Third, since ‘Yunnan Restaurant’ category appeared when searching “shanghai, China”, I decided to look up the **List of Chinese cuisine** from wikipedia: https://en.wikipedia.org/wiki/Chinese_cuisine, and added the eight major cuisines and some other categories based on my personal preference.

After that, NaN values in 'postalCode' and 'address' columns were replaced by gathering data from Geopy library.

Finally, Select columns most related to audiences to display.

A map of restaurants was also created with names superimposed on top to show the searching location neighborhood.

To see full code, please click the link below:

https://github.com/Faye0924/Coursera_Capstone/blob/master/Capstone%20Project%20-%20The%20Battle%20of%20Neighborhoods%20-%20Search%20for%20Chinese%20Restaurant%20-%200Github%20version.ipynb

4. Results section

Here's the testing location list:

Bangkok, Thailand	Paris, France	Singapore, Singapore
London, United Kingdom	Seattle, WA	Tokyo, Japan
Los Angeles, CA	Shanghai, China	
New York city, N	Shenzhen, China	

Chinese Restaurants information table

Bangkok, Thailand

	name	categories	address	distance	postalCode
0	S.B.L Restaurant (ส.บ.ล. กัสดาคารสมบุญล้ง)	Chinese Restaurant	710-714 Mahachai Rd	1372	10200
1	Panfah Restaurant (ภัตตาคารผ่านฟ้า)	Chinese Restaurant	500, 502, 504 Phra Sumen Rd	1270	10200
2	Earwthai Restaurant (ภัตตาคารเอื้อวไถ่)	Chinese Restaurant	ปิ่นเกล้า	1539	10700
3	Sirirattana Restaurant (สวนอาหารศิริรัตน)	Asian Restaurant	ถนนข้าวสาร	715	10200
4	Sabai Restaurant	Asian Restaurant	Rong Mai JaoPha Road	708	10200
5	มาเรีย (Maria Restaurant)	Dim Sum Restaurant	50-52 Ratchadamnoen Klang Rd.	796	10200
6	Jade Garden Restaurant (ภัตตาคารเจ็ดการ์เด็น)	Chinese Restaurant	Rama VIII Bridge	1903	10700
7	Little Home Bakery & Restaurant (ลิตเติ้ลโฮม เบ...	Asian Restaurant	99-101 Vorrachak Rd.	1687	10110
8	Shangarila Restaurant (ภัตตาคารเซียงการีลา)	Chinese Restaurant	306 Yaowarat Rd.	2065	10100
9	Watchara's Restaurant (วัชรโกษนา)	Chinese Restaurant	261/19-20 Charan Sanitwong Rd.	2559	10700
10	Versaille Restaurant (ภัตตาคารแวร์ซาย)	Chinese Restaurant	Charan Sanitwong Rd	2997	10600
11	Thaveechai Restaurant (ทวีชัยโกษนา)	Chinese Restaurant	202-204 Suan Mali 3	1912	10100

London, United Kingdom

	name	categories	address	distance	postalCode
0	London Chinatown Restaurant	Chinese Restaurant	27 Gerrard St	547	W1D 6JN
1	Hung's Chinese Restaurant 美食軒	Chinese Restaurant	27 Wardour St	531	W1D 6PR
2	New Loon Fung Chinese Restaurant	Chinese Restaurant	42-44 Gerrard St	557	W1D 5QG
3	Kowloon Restaurant and Cakeshop	Chinese Restaurant	21-22 Gerrard St	550	W1D 6JH
4	Lin's Restaurant & Bar	Chinese Restaurant	134 Southwark St	1774	SE1 0SW

Los Angeles, CA

	name	categories	address	distance	postalCode
0	Yang Chow Restaurant	Chinese Restaurant	819 N Broadway	1115	90012
1	Full House Seafood Restaurant	Chinese Restaurant	963 N Hill St	1457	90012
2	Wok Inn Restaurant	Asian Restaurant	201 N Los Angeles St Ste 102	116	90012
3	Won Kok Restaurant	Chinese Restaurant	210 Alpine St	1040	90012
4	Little Sagion International Restaurant Group H...	Asian Restaurant	Los Angeles	457	90013
5	Keung Kee B.B.Q. Restaurant	Chinese Restaurant	420 Ord St	790	90012
6	Hong Kong BBQ Restaurant	Chinese Restaurant	803 N Broadway	1067	90012
7	Hop Woo BBQ Seafood Restaurant	Chinese Restaurant	845 N Broadway	1203	90012

New York city, NY

	name	categories	address	distance	postalCode
0	Jing Fong Restaurant 金豐大酒樓	Dim Sum Restaurant	20 Elizabeth St	821	10013
1	Deluxe Green Bo Restaurant	Chinese Restaurant	66 Bayard St	734	10013
2	Golden Unicorn Restaurant 麒麟金閣	Dim Sum Restaurant	18 E Broadway	748	10002
3	Bo Ky Restaurant 波記潮州小食	Chinese Restaurant	80 Bayard St	702	10013
4	Chatham Seafood Restaurant	Dim Sum Restaurant	6 Chatham Sq	666	10038
5	218 Restaurant	Chinese Restaurant	218 Grand St	1091	10013
6	Wing Kee WK Restaurant 榮記飯店 (former 69)	Chinese Restaurant	69 Bayard St	726	10013
7	Win Won Restaurant	Chinese Restaurant	10 Liberty Pl	483	10038
8	Hoy Wong Restaurant 喜喜飯店	Chinese Restaurant	81 Mott St	808	10013
9	Sun Sai Gai Restaurant	Chinese Restaurant	220 Canal St	759	10013
10	New Hon Wong Restaurant 新恒旺大飯店	Chinese Restaurant	244 Canal St	780	10013
11	Pang Huang Restaurant Corp	Chinese Restaurant	111 Lafayette St	756	10013
12	Great Fortune Chinese Restaurant 聚旺茶餐廳	Cantonese Restaurant	5 Catherine St	748	10038
13	Su Hang Restaurant	Chinese Restaurant	103 Washington St Apt 2	833	10006
14	Fei Tenc Restaurant	Chinese Restaurant	68 E Broadway	948	10002
15	China Restaurant	Chinese Restaurant	50 Henry St	884	10002
16	Beijing Pop Kabob Restaurant	Chinese Restaurant	122 Mulberry St	882	10013
17	Hop Shing Restaurant 合誠茶樓	Dim Sum Restaurant	9 Chatham Sq	695	10038
18	88 Reach House chinese restaurant	Chinese Restaurant	88 Division St	1054	10002
19	East Broadway Restaurant	Asian Restaurant	94 E Broadway	1058	10002
20	Dragon Gate Chinese Restaurant	Chinese Restaurant	92 Elizabeth St	1077	10013
21	Grand Bo Ky Restaurant 波記潮州小食	Chinese Restaurant	216 Grand St	1086	10013

Paris, France

	name	categories	address	distance	postalCode
0	Restaurant Sichuan	Szechuan Restaurant	17 rue Le Peletier	2030	75009
1	Restaurant Dicoeur 晓春	Chinese Restaurant	Rue du Faubourg Montmartre 45	2122	75009
2	Restaurant Ayào.阿耀面点	Chinese Restaurant	50 rue de Provence	2294	75009
3	A Hot Pot Restaurant 一家	Szechuan Restaurant	27 rue d'Enghien	1712	75010

Seattle, WA

	name	categories	address	distance	postalCode
0	Harbor City Restaurant	Chinese Restaurant	707 S King St	787	98104
1	New Star Restaurant	Chinese Restaurant	516 S Jackson St	557	98104
2	Tai Tung Restaurant	Chinese Restaurant	655 S King St	729	98104
3	Phocom Restaurant	Asian Restaurant	81 Yesler Way	462	98104
4	Chau's Chinese Restaurant	Chinese Restaurant	310 4th Ave S	463	98104
5	Number 1 Teriyaki Restaurant	Asian Restaurant	301 2nd Ave S	464	98104
6	Joyale Seafood Restaurant	Dim Sum Restaurant	900 S Jackson St #203	889	98104
7	Ocean Star Restaurant	Cantonese Restaurant	605 7th Ave S	851	98104
8	Atlas Chinese Restaurant	Chinese Restaurant	424 Maynard Ave S	710	98104

Shanghai, China

	name	categories	address	distance	postalCode
0	Nanxiang Steamed Bun Restaurant (南翔馒头店)	Dumpling Restaurant	85 Yuyuan Rd 豫园老街85号	432	200010
1	Dragon King Restaurant (龙皇)	Chinese Restaurant	535 Zhongshan E 2nd Rd 中山东二路149号	680	200008
2	Crayfish Restaurant (虾满堂)	Chinese Restaurant	金陵东路612号一楼	842	200021
3	Tsui Wah Restaurant (翠华餐厅)	Hong Kong Restaurant	西藏南路251号宏基西门厅106室 251 Xizang Rd. S.	1227	200021
4	Lost Heaven Yunnan Restaurant (花马天堂云南餐厅)	Yunnan Restaurant	17a Yan'an E Rd	1079	200002
5	DaMaTou Tea Restaurant (大马头茶餐厅)	Chinese Restaurant	西藏南路577号	1123	200021
6	Charme Restaurant (港丽餐厅)	Cantonese Restaurant	268 Xizang Rd 西藏中路268号	1883	200085
7	Guyi Hunan Restaurant (古意湘味浓)	Asian Restaurant	8 Century Ave 世纪大道8号	1692	200120
8	Xinwang Restaurant (新旺茶餐厅)	Chinese Restaurant	汉口路309号 309 Hankou Rd.	1638	200002
9	Tsui Wah Restaurant (翠华餐厅)	Hong Kong Restaurant	8 Century Ave 世纪大道8号	1697	200120
10	Lisboa Restaurant (葡京茶餐厅)	Chinese Restaurant	93-111 Huaihai M Rd 淮海中路93-111号	1429	200021
11	Seventh Son Restaurant (家全七福)	Dim Sum Restaurant	33 Fucheng Rd	1450	200120
12	Chao Man Restaurant (潮民冰室) (潮民冰室)	Hong Kong Restaurant	上海广场 138	1471	200021
13	Charme Restaurant (食尚港丽)	Cantonese Restaurant	8 Century Ave 世纪大道8号	1758	200120
14	Charme Restaurant (港丽餐厅)	Cantonese Restaurant	正大广场 名南路	1535	200002
15	Tang Dynasty Restaurant (唐朝酒店)	Chinese Restaurant	陆家嘴环路166号未来资产大厦2F-3F 2/F & 3/F Mirae Asset T...	1517	200120
16	Tsui Wah Restaurant (翠华餐厅)	Hong Kong Restaurant	168 Lujiazui W Rd 陆家嘴西路168号	1627	200120
17	TAI HING Restaurant (太兴餐厅)	Chinese Restaurant	138 Huaihai M Rd 淮海中路138号	1472	200021
18	Under Bridge Spicy Crab Restaurant (桥底辣蟹)	Cantonese Restaurant	388 Madang Rd 马当路388号	2046	200020
19	Waya Restaurant (蓝方餐厅)	Chinese Restaurant	410 Sichuan M Rd	1686	200002
20	Three Street Restaurant (三玛璐)	Chinese Restaurant	黄浦区汉口路413号	1684	200002
21	Charme Restaurant (港丽餐厅)	Cantonese Restaurant	168 Lujiazui W Rd 陆家嘴西路168号	1541	200120
22	Lisboa Restaurant (葡京制造)	Chinese Restaurant	168 Lujiazui W Rd 陆家嘴西路168号	1634	200120
23	Tai Kang Tang Bao Guan Dumpling Restaurant (泰康...)	Dumpling Restaurant	2/F 766 Nanjing E Rd 南京东路766号泰康食品2楼	2107	200085
24	Cha's Restaurant (壹餐厅)	Hong Kong Restaurant	30 Sinan Rd, 1F 思南路30-4号	2663	200020
25	Charme Restaurant (港丽餐厅)	Cantonese Restaurant	299 Nanjing E Rd 南京东路299号	1769	200020
26	Qian Restaurant (黔香阁)	Chinese Restaurant	浦城路171号	1852	200122
27	O'Yamee Restaurant (欧米亚)	Asian Restaurant	世纪大道55号世纪浮庭2F-8	1824	200008
28	Lu Ya Restaurant (绿雅酒家)	Chinese Restaurant	江西中路372号	1998	200002
29	Charme Restaurant (港丽餐厅)	Cantonese Restaurant	300 Huaihai M Rd 淮海中路300号	1874	200021
30	Cantonese Cuisine Restaurant (家有靓场)	Chinese Restaurant	丽园路501	2055	200023

Shenzhen, China

	name	categories	address	distance	postalCode
0	Jindaoyuan Restaurant (金稻田砂锅粥)	Cantonese Restaurant	福田区福中路彩田万家百货对面	1426	518000
1	De Grand Restaurant (逸和轩酒楼)	Dim Sum Restaurant	A座 2008号	1514	518035
2	Charme Restaurant (港丽餐厅)	Cantonese Restaurant	Shop L1-37, WongTee Plaza	2097	518048
3	Colleague Music Restaurant (同仁之享)	Hotpot Restaurant	海田路 皇岗	2271	518000
4	Fangdu Restaurant (芳都酒楼)	Chinese Restaurant	罗湖区罗芳路深港新村2栋2楼	2400	518000
5	Fangdu Restaurant (芳都酒楼)	Chinese Restaurant	福田区 彩田南路2048号福建大厦1-3楼	2348	518026
6	丹桂轩 (车公庙店) Laurel Restaurant	Chinese Restaurant	天安数码城, 天安会所3F	3618	518000
7	Man Ho Chinese Restaurant	Chinese Restaurant	6005 Shennan Rd., Futian District	3307	518000
8	Tsui Wah Restaurant (翠华餐厅)	Hong Kong Restaurant	2009 Huaqiang N Rd 华强北路2099号	3476	518000
9	Wing Fat Restaurant (荣发港式茶餐厅)	Hong Kong Restaurant	10 Fumin Rd.	3462	518000
10	东宝海鲜火锅店 Winner Hot Pot Seafood Restaurant	Chinese Restaurant	水围十街208栋	3531	518000
11	Laurel Restaurant (丹桂轩)	Chinese Restaurant	农园路香榭里花园紫苑1F	4037	518000
12	Hao Jiang Restaurant (濠江餐廳)	Hong Kong Restaurant	石厦军营 益田路	3939	518000
13	潮江春 Chiu Chow Garden Restaurant	Cantonese Restaurant	6035 Shennan Blvd, 深航锦江国际酒店3-4F	4224	518000

Singapore, Singapore

	name	categories	address	distance	postalCode
0	Swatow Seafood Restaurant 汕头海鲜 (Swatow Seafood...	Chinese Restaurant	181 Lorong 4 Toa Payoh #02-602	2418	310181
1	Wang Lee Seafood Restaurant	Chinese Restaurant	94 Toa Payoh Lor 4	2120	310094
2	Lee Fun Nam Kee Chicken Rice & Restaurant 李范南记...	Chinese Restaurant	Blk 94 Lorong 4 Toa Payoh #01-04	2211	310094
3	Silk Restaurant	Chinese Restaurant	Singapore Island Country Club	2413	578774
4	Whampoa Keng Fish Head Steamboat Restaurant 黄埔...	Chinese Restaurant	556 Balestier Road	2264	329872
5	Mapo Doufu Restaurant / T-One Steamboat	Chinese Restaurant	200 Upper Thomson Road	1431	575583
6	Bee Kia Seafood Restaurant	Chinese Restaurant	Sin Mee Eating House 勝美餐室	2195	300001
7	Hong Kong Street Family Restaurant	Hong Kong Restaurant	273 Thomson Road	2618	307644
8	Swee Choon Tim Sum Restaurant	Dim Sum Restaurant	185/187/189/191 Jln Besar	4707	208879
9	Teechew Restaurant Huat Kee (1998) Pte Ltd	Chinese Restaurant	#02-01, RELC Building	3155	258362
10	Red Star Restaurant 红星酒家	Dim Sum Restaurant	54 Chin Swee Rd, #07-23	6043	160054
11	The Chinese Restaurant	Chinese Restaurant	Raffles Town Club	2208	297829
12	Aroma restaurant	Chinese Restaurant	Toa Payoh North Toa Payoh	2137	310203
13	Kian Seng Seafood Restaurant 建成海鲜馆	Chinese Restaurant	4013 Ang Mo Kio Industrial Park 1	3362	569629
14	Plum Village Restaurant	Chinese Restaurant	16 Jalan Leban (off Upp Thomson Rd)	3451	574416
15	Imperial Treasure Super Peking Duck Restaurant	Peking Duck Restaurant	#05-42/45 The Paragon	4202	238859
16	Wan Hao Chinese Restaurant	Chinese Restaurant	Level 3, Marriott Singapore Tang Plaza	4001	238865
17	East Ocean Teochew Restaurant 東海潮州酒家	Chinese Restaurant	#05-08/09 Ngee Ann City, Podium Block	4280	238872
18	Jade Palace Seafood Restaurant 金湖海鮮酒家 (Jade Pa...	Chinese Restaurant	#B1-13, Forum The Shopping Mall	3847	238884

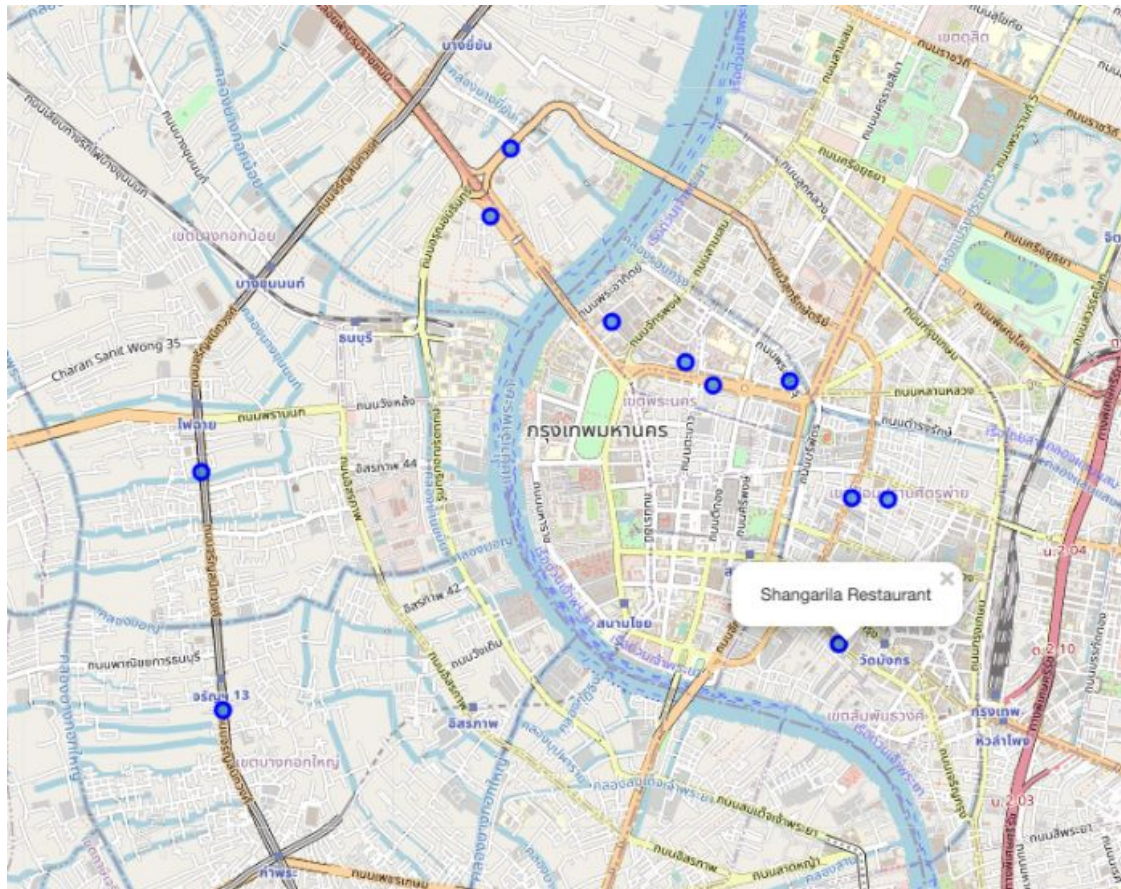
Tokyo, Japan

	name	categories	address	distance	postalCode
0	家全七福酒家 Seventh Son Restaurant	Chinese Restaurant	丸の内2-4-1	412	100-6336

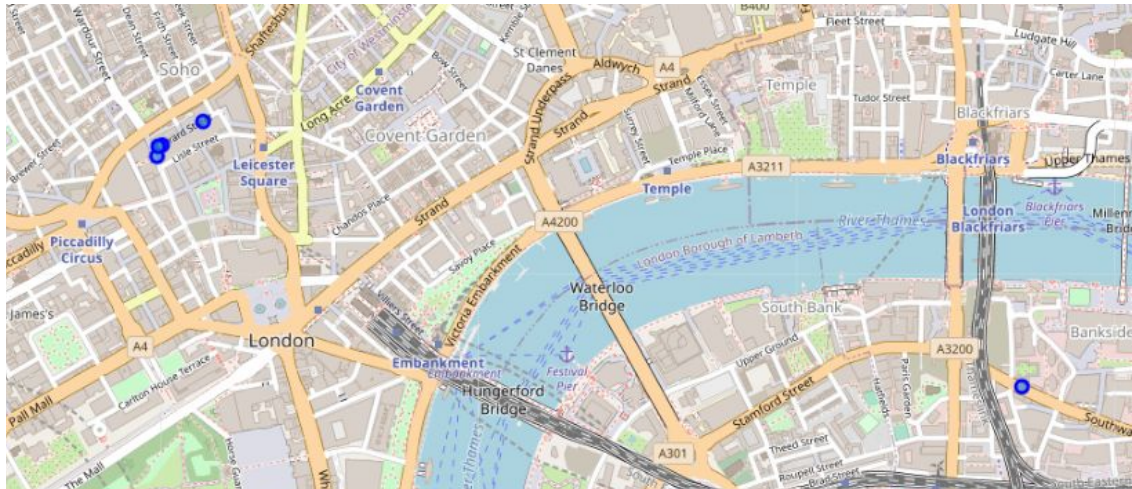
Running the code from this project, we got some clean Chinese restaurants information dataframe, showing restaurants' name, categories, address, distance and postalCode.

Chinese Restaurants Mapping

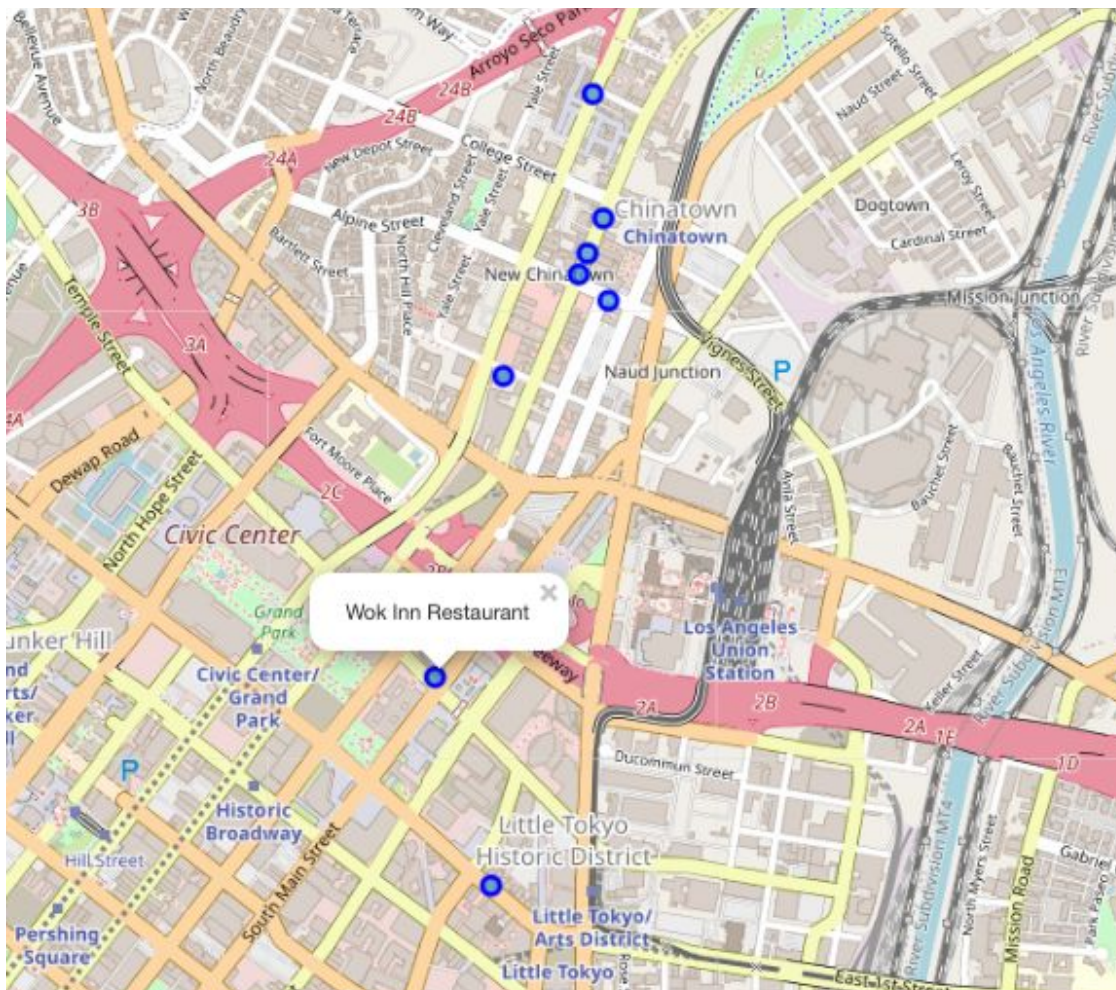
Bangkok, Thailand



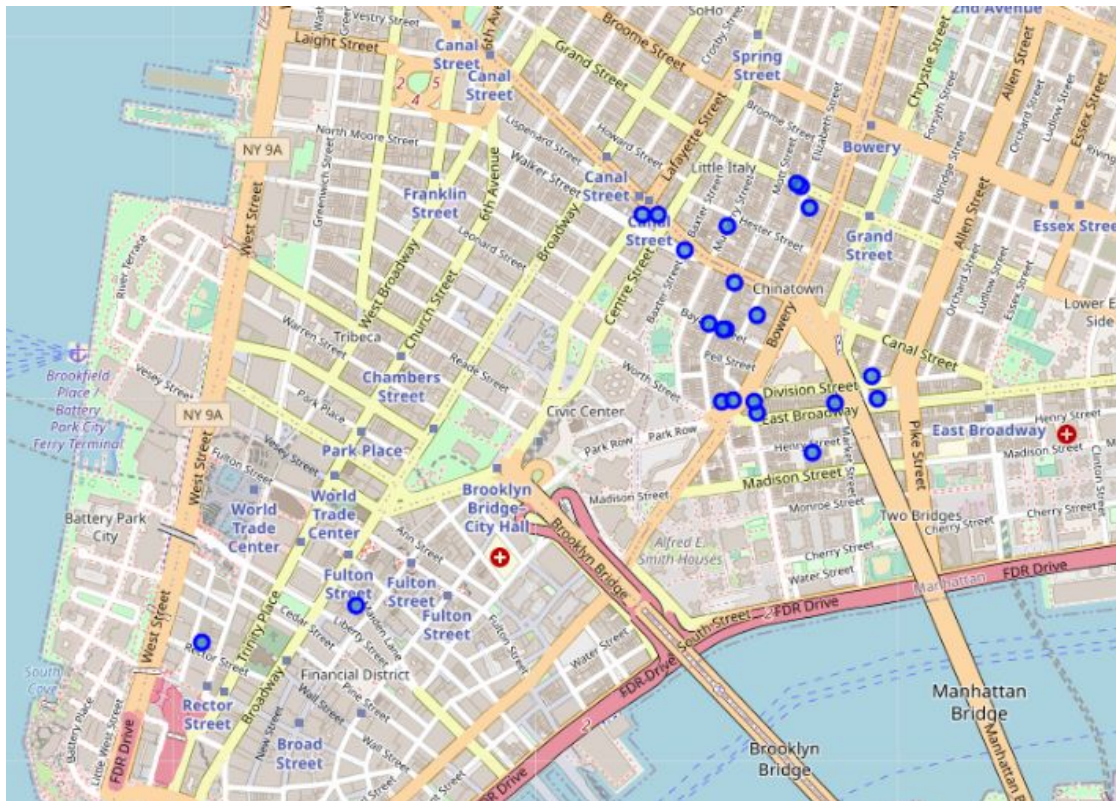
London, United Kingdom



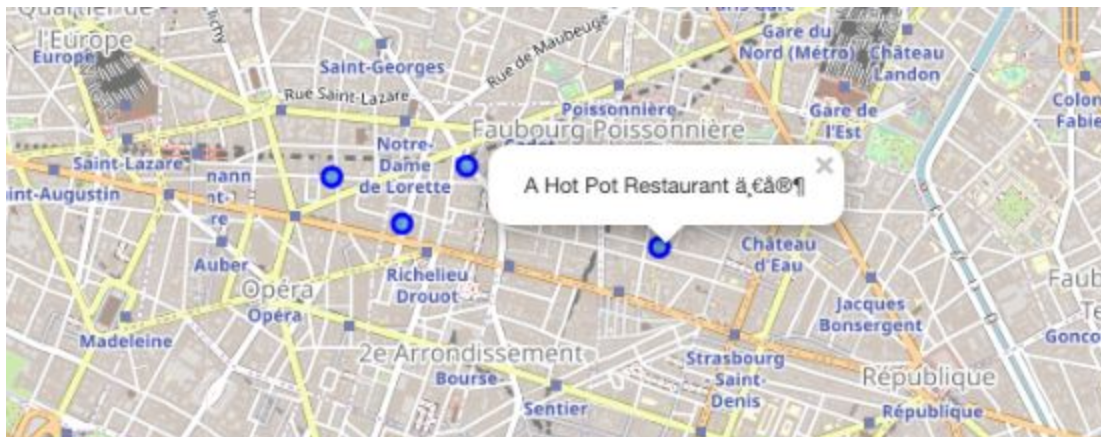
Los Angeles, CA



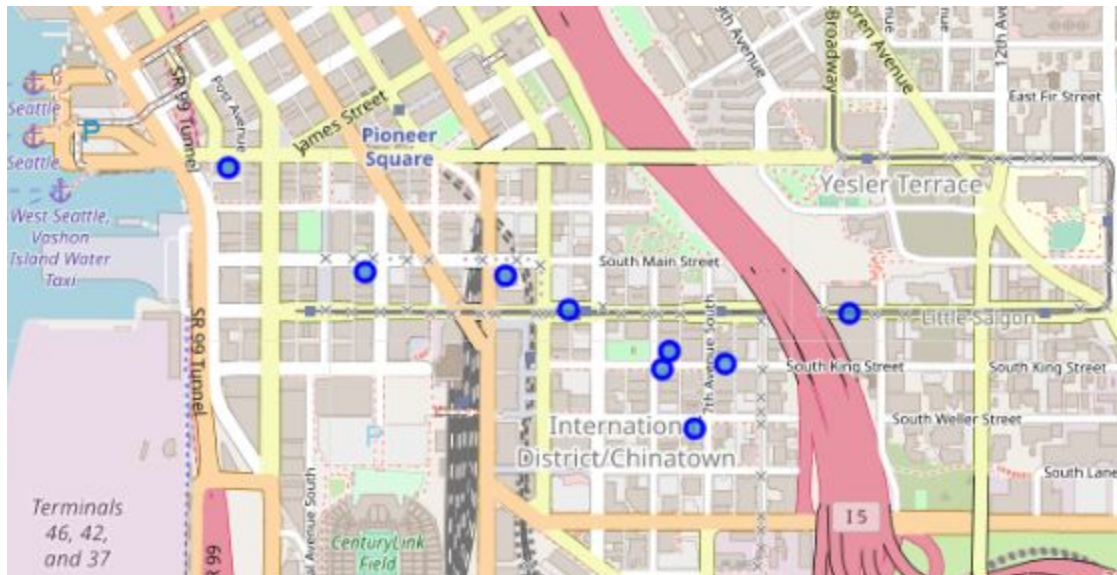
New York city, NY



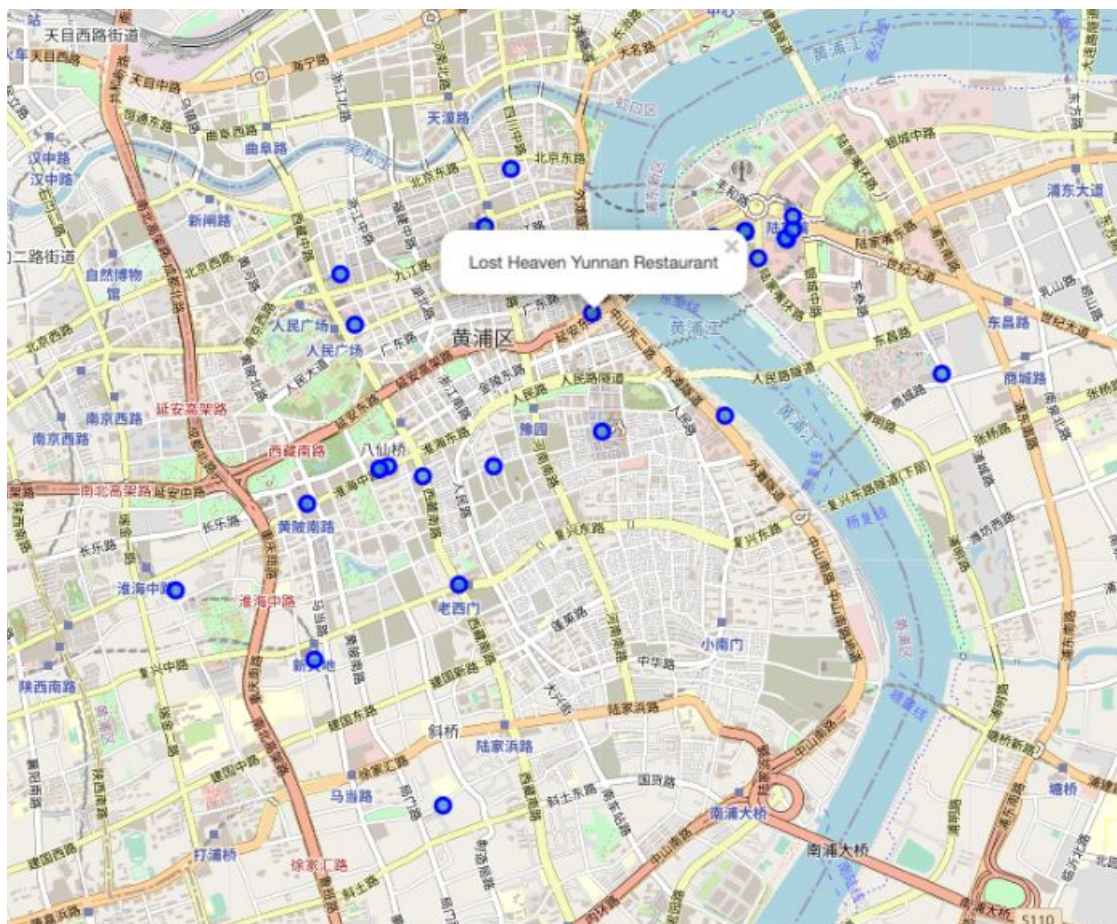
Paris, France



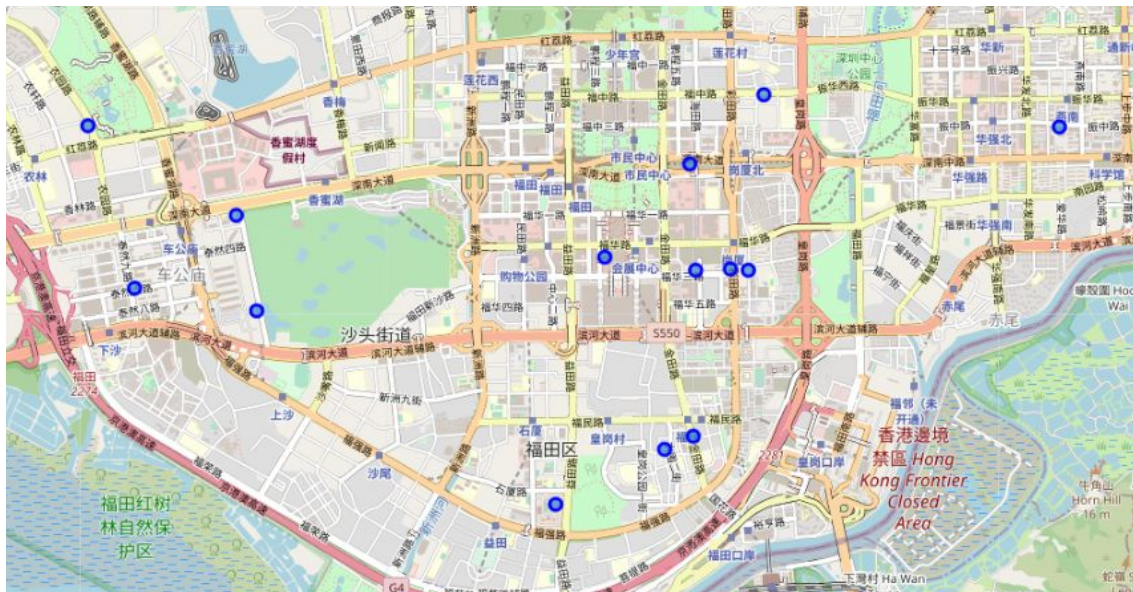
Seattle, WA



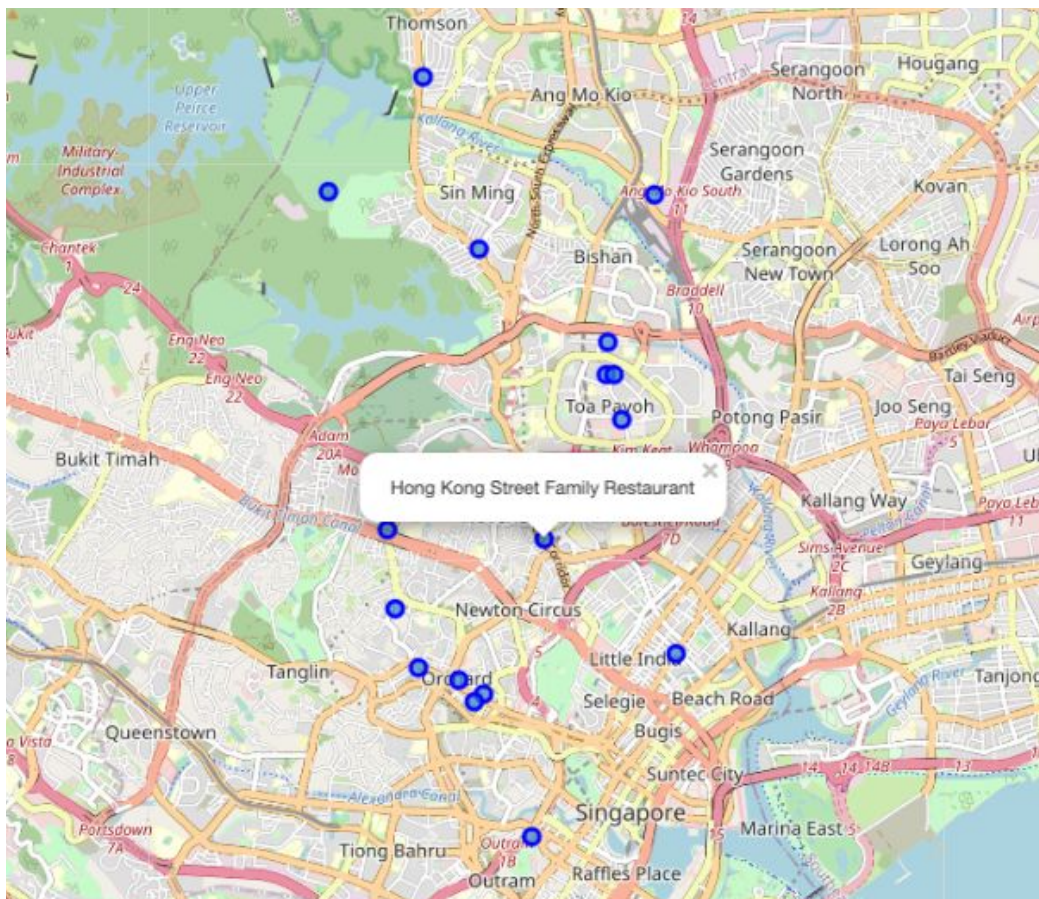
Shanghai, China



Shenzhen, China



Singapore, Singapore



Tokyo, Japan



Running the code from this project, we were also able to display searching location's map with nearby Chinese restaurants' names superimposed on top.

5. Discussion section

For the testing locations, more US and China locations are selected because:

US is where we live, also the starting point for this project, and I wanted to make sure this project at least works in US;

China, apparently should have more Chinese restaurants categories, as you can see, only Shanghai shows the "Yunnan Restaurant" category, that is why I decided to include **The eight major traditions of Chinese cuisine** into my `chinese_restaurants_list`.

In the dataframe 'name' and 'address' columns, I kept the foreign language, because it might be useful when traveling. However, Folium mapping didn't display foreign language correctly, and it was beyond my ability to fix that for now, so I could only keep the english name in the map.

This project gives a clear table showing restaurants' name, categories, address, distance and postalCode around a certain location; also the restaurants' name superimposed on a neighborhood map.

Also, this project can be modified to search for other restaurant categories. All you have to do is to modify the **chinese_restaurants_list** to your preferred categories, just be sure to follow the comment instruction in that part.

6. Conclusion section

Overall, if you love Chinese food, and always looking for Chinese restaurants when traveling, like me; or, maybe you are just sitting in front of a computer and want to explore a location, find some restaurants, this project can give you some useful information.

It's a shame that I don't have a Foursquare Premium account, otherwise, I would make the effort to extract restaurant's ratings to make this project more valuable.

This project has shown me a practical application to resolve a real world situation using Data Science tools.

I feel rewarded with the efforts and time spent. I believe this course with all the topics covered is well worthy of appreciation.

7. Reference

Chinese restaurant: https://en.wikipedia.org/wiki/Chinese_restaurant

Chinese cuisine: https://en.wikipedia.org/wiki/Chinese_cuisine

List of cities by international visitors:

https://en.wikipedia.org/wiki/List_of_cities_by_international_visitors