

presentation (Week 2)

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A description of the problem and a discussion of the background



National Chi Nan University is a research-intensive university in Pu Li, Taiwan. The university nearly famous attraction “Sun Moon Lake” and a lot of foreign sightseers visiting. Chi Nan University has the beautiful campus and opens to visit the general public



The school side hope that more public and foreign sightseers visit campus, but campus have not enough restaurant, sightseers must go to Pu Li town look for restaurant, The school side want to make restaurant guide information for foreign sightseers and want to know restaurant style, address, telephone number on school around, of course, foreign sightseers don't want to eat McDonald's or fast food restaurant, so the school side hope collect Taiwanese cuisine restaurant, Chinese cuisine restaurant and Taiwan tea restaurant information, the information will help sightseers looking for own interested restaurant style and improve visit willingness.

description of the data and how it will be used to solve the problem
 In case, I will use Foursquare API to search for venues and make the call to the
 Foursquare database and in return, I use K-means clustering to do classification
 restaurant style and distance, the data form:

```
'https://api.foursquare.com/v2/venues/search?client_id={} & client_secret={} & ll={}, {
}&v={} & query={} & radius={} & limit={} '.format(CLIENT_ID, CLIENT_SECRET,
latitude, longitude, VERSION, ***_query, radius, LIMIT)
```

Return result like this: (this is example)

The screenshot shows a Jupyter Notebook with two cells. The first cell displays a list of restaurant names, including 'Sweet Not Spicy Tempura Japanese Food', 'Japanese Colonial-era Housing for ...', 'Gi-On Japanese Cuisine', 'Peony Japanese Cuisine', 'Hip Japanese Restaurants', 'Tachibana Japanese Spa', 'aburi List - Japanese Casual Restaurant (居食創作料理)', 'Japanese Cuisine B2 @Sogo', 'Yi Wu Wei Japanese Restaurant', 'Irodoni (彩日本料理)', 'Taipei Japanese School', 'Marumo Japanese Bowl Cafe (瑪爾摩日式丼飯 微風台北車站店)', 'Sumie Nouvelle Cuisine Japanese', 'Japanese Bar 7th', 'Cho Ji Japanese BBQ', 'Ippai Japanese Food', 'Japanese Ramen', and 'Kaguraya Japanese Restaurant'. The second cell shows a table of venue data with columns: name, categories, address, cc, city, country, crossStreet, distance, and formattedAddress. The table contains four rows of data, including 'Mitsui Japanese Cuisine (三井日式料理)', 'Sweet Not Spicy Tempura Japanese Food', 'Japanese Colonial-era Housing for ...', and 'Gi-On Japanese Cuisine'.

	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress
0	Mitsui Japanese Cuisine (三井日式料理)	Japanese Restaurant	農安街30號	TW	台北市	臺灣	NaN	4821	[農安街30號, 台北市, 104, 臺灣]
1	Sweet Not Spicy Tempura Japanese Food	Japanese Restaurant	忠孝東路4段553巷2弄11號	TW	NaN	臺灣	NaN	486	[忠孝東路4段553巷2弄11號, 臺灣]
2	Japanese Colonial-era Housing for ...	Historic Site	Lane 53, Qidong St, Jhongheng District	TW	Jhongheng District	臺灣	NaN	3540	[Lane 53, Qidong St, Jhongheng District, Jhon...]
3	Gi-On Japanese Cuisine	Japanese Restaurant	南京東路三段133號B2	TW	中山區	臺灣	NaN	2825	[南京東路三段133號B2, 中山區, 臺北市, 104, 臺灣]

And I must analysis distance for venues, sightseers will understand how many restaurant style, address, telephone number and distance, the school side will can make restaurant guide information for sightseers.