# THE BEST PLACE TO RUN BUSINESS

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## Background & Problem

- Taiwan is becoming the international country and visited by a lot of foreigners each year. That's why the need to find reliable and popular restaurants is getting important. And if we can also add other information, such as population, that will quickly become another visual tool for restaurant owners to make decisions about where they should run their business.
- For those foreigners, the tools are familiar with could be Foursquares. If we can collect information from Foursquare, that would be more accessible for foreigners to use it. And the transportation in Taiwan is Mass Rapid Transit, if we can combine the two things together, it's will be convenient for users. For restaurant owners, where to run their business is always one of the most crucial decisions for them. If there is a visual tool for them to see population in each area, that can help them to make a better decision-making.

### Data Sources

- 1 MRT System
- 2 Foursquares
- 3 Population Info.



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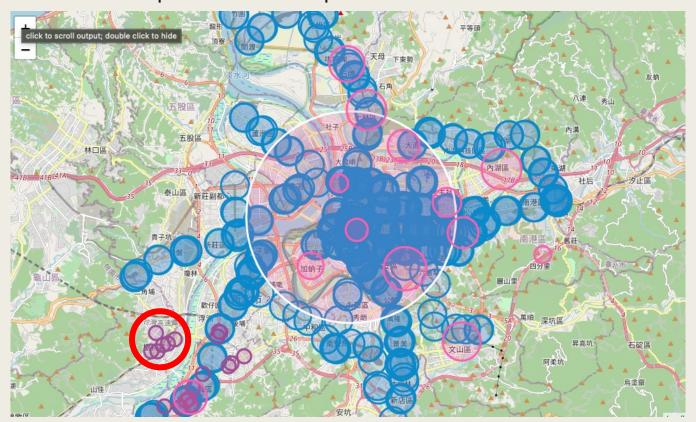
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	Names	Latitudes	Longtitudes
0	新北產業園區站出口	25.061548	121.459926
1	幸福站出口2	25.049545	121.460593
2	幸福站出口1	25.050126	121.460146
3	新埔民生站出口	25.026125	121.466839
4	板橋站出口5	25.015502	121.464312
5	板橋站出口4	25.015105	121.464938
6	板新站出口	25.014491	121.472212
7	中原站出口	25.008410	121.484159
8	橋和站出口	25.004413	121.490461
9	中和站出口	25.001981	121.496052
10	景平站出口	24.991968	121.516553
11	秀朗橋站出口2	24.990549	121.525051
12	秀朗橋站出口1	24.990418	121.525740
13	十四張站出口	24.984467	121.527701
14	松山站出口5	25.050557	121.578130
15	松山站出口4	25.049799	121.577971
16	松山站出口3	25.049799	121.577464
<sub>*</sub> 17	松山站出口2	25.050171	121.576244
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	site_id	people_total	area	population_density	Latitudes	Longtitudes
0	台北市松山區	204193.0	9.29	21985.0	25.0542	121.5639
1	台北市信義區	220021.0	11.21	19631.0	25.0409	121.5720
2	台北市大安區	307631.0	11.36	27077.0	25.0249	121.5434
3	台北市中山區	227387.0	13.68	16619.0	25.0792	121.5427
4	台北市中正區	158014.0	7.61	20772.0	25.0421	121.5199
5	台北市大同區	126043.0	5.68	22185.0	25.0627	121.5113
6	台北市萬華區	187076.0	8.85	21133.0	25.0263	121.4970
7	台北市文山區	271806.0	31.51	8626.0	24.9929	121.5713
8	台北市南港區	120297.0	21.84	5507.0	25.0312	121.6112
9	台北市內湖區	285795.0	31.58	9050.0	25.0689	121.5909
10	台北市士林區	283459.0	62.37	4545.0	25.0950	121.5246
11	台北市北投區	253319.0	56.82	4458.0	25.1152	121.5150

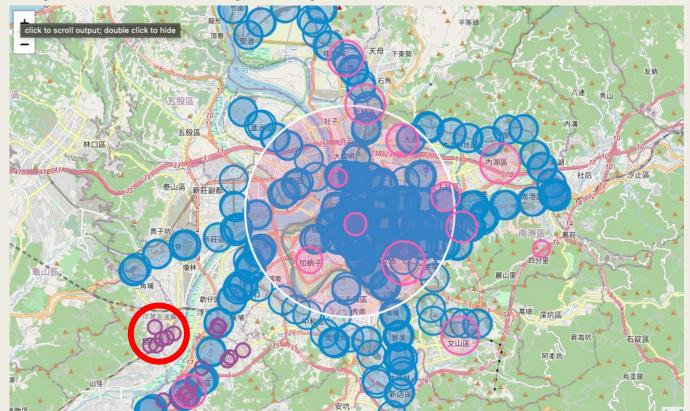
# Data Cleaning & Visualization

■ In order to present the best visual population information for restaurant owners, we need to use K-means and find the best part on the map as follows:



## **Exploratory Data Analysis & Modeling**

■ With K-means classification, we can easily find out the while circle is the most populatedplace and its public transportation is also the most convenient. That is why white circle is the suitable place for owners to run their restaurant. And the red circle as you can see on the map, its population and public transportation is not that convenient. That is why restaurant owners may lose their money if they run their restaurant in this area.



### Conclusions & Future directions

- 1<sup>st</sup> way is to move their restaurants closer to MRT system (blue circles) because MRT system brings a lot of people and foreigners. This will generate business rewards accordingly.
- 2<sup>nd</sup> way is to move the restaurants to the downtown (white circle) because that is the center of the city and is also the center of the public transportation. That is why there are so many blue circles and pink circles around this area.
- In the future, this map can also add more information, such as hotel information, other business revenues, business types in order to see the whole picture about those areas. The more information, the better decision-making we can do.