

SEARCHING THE BEST PLACE FOR STARTING A NEW COFFEE SHOP IN SEOUL, SOUTH KOREA

JAECHOL HWANG

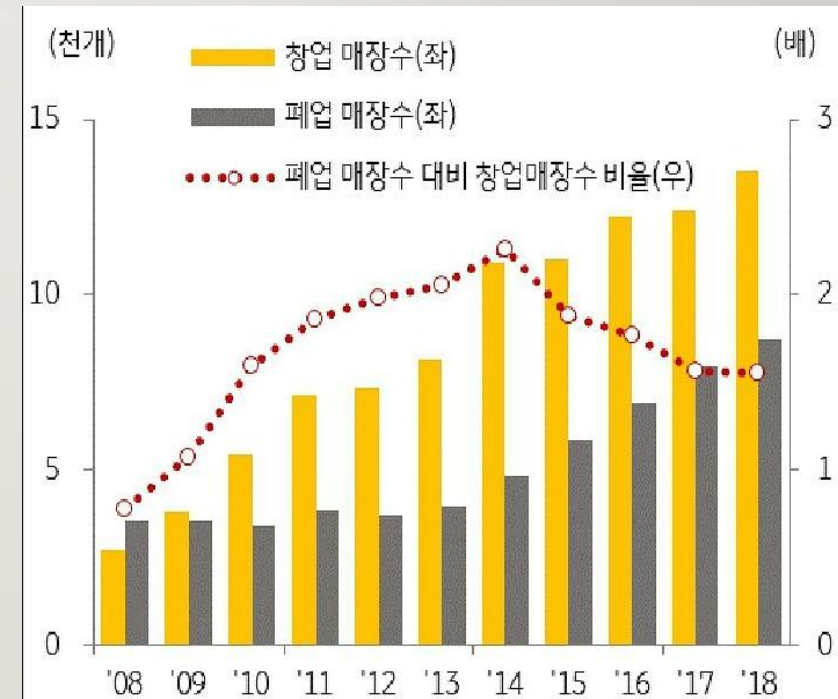


INDEX

- Background
- Problem statement
- Methodology
 - EDA
 - Example – Jongno-gu
- Result
- Discussion

BACKGROUND

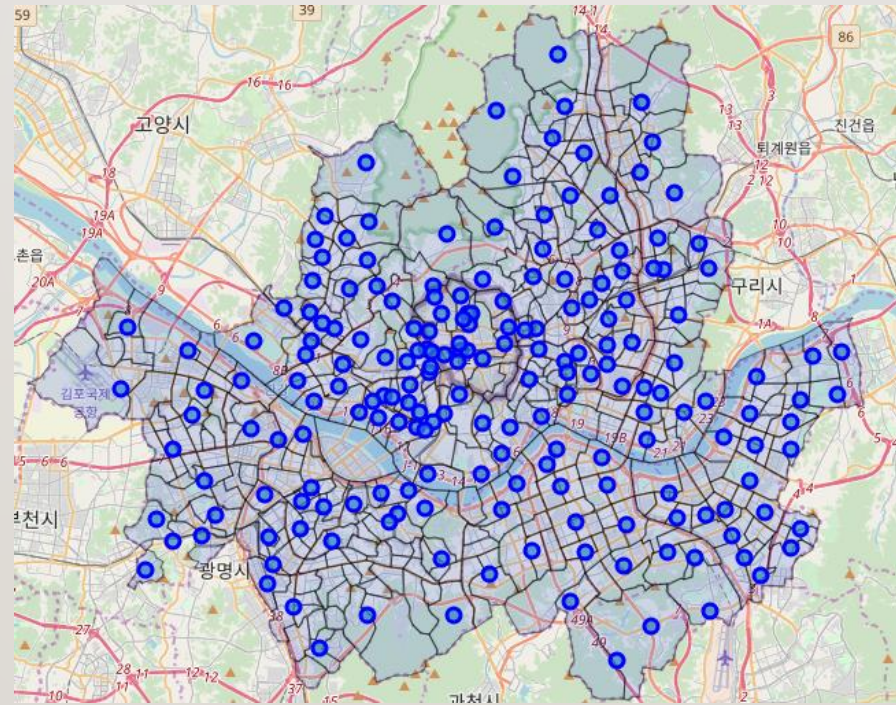
- As of July 2019, in South Korea, there were 71,000 Coffee shops. And the number of Coffee shops are increasing even now. However, many of them were closed before 3 years.
- It means that many people tried to open coffee shop but a few of them succeed to keep their shop.
- So we should know that points of the success.



Yellow bar means the number of start-up coffee shop
and black bar means the number of shut-down coffee shop

PROBLEM STATEMENT

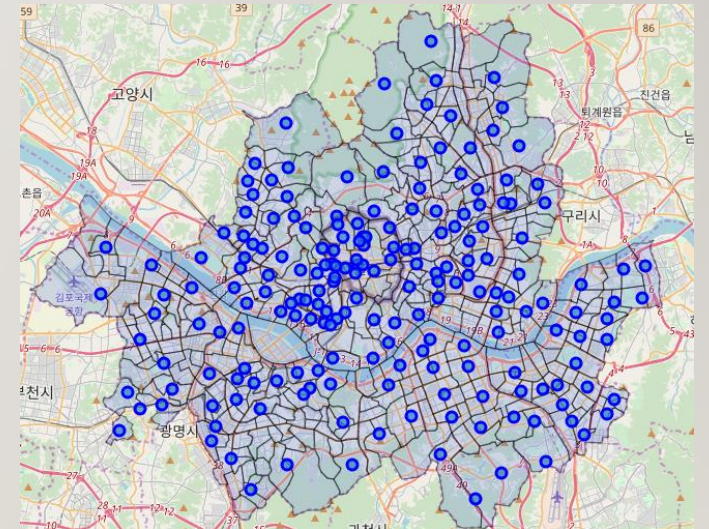
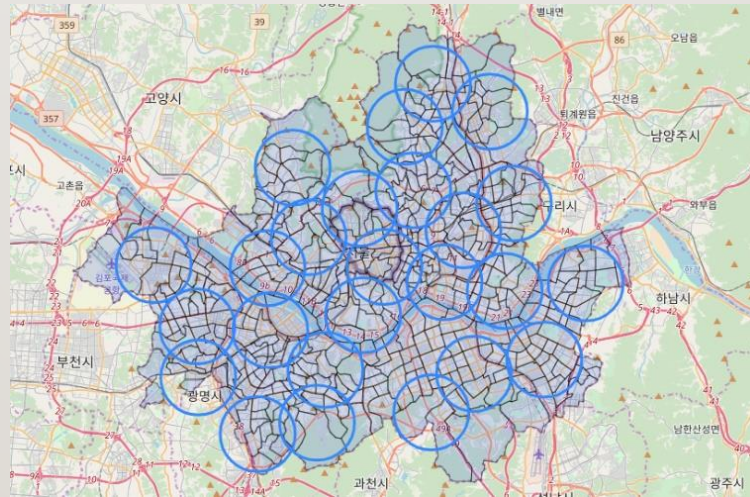
- In Seoul, South Korea, where is the best place for starting a new coffee shop?



METHODOLOGY – DATA

- Dataset I: District and Dong data of Seoul

	district	district_eng	lat	lng
0	종로구	Jongno-gu	37.592128	126.979420
1	중구	Jung-gu	37.557335	126.997985
2	용산구	Yongsan-gu	37.528582	126.981987
3	성동구	Seongdong-gu	37.548240	127.043114
4	광진구	Gwangjin-gu	37.543059	127.088351
	dong	dong_eng	lat	lng
0	가락동	Garak-dong	37.494280	127.117631
1	가리봉동	Garibong-dong	37.483017	126.887363
2	가산동	Gasan-dong	37.475469	126.884239
3	가양동	Gayang-dong	37.567984	126.844436
4	가회동	Gahoe-dong	37.582806	126.984865



METHODOLOGY – DATA

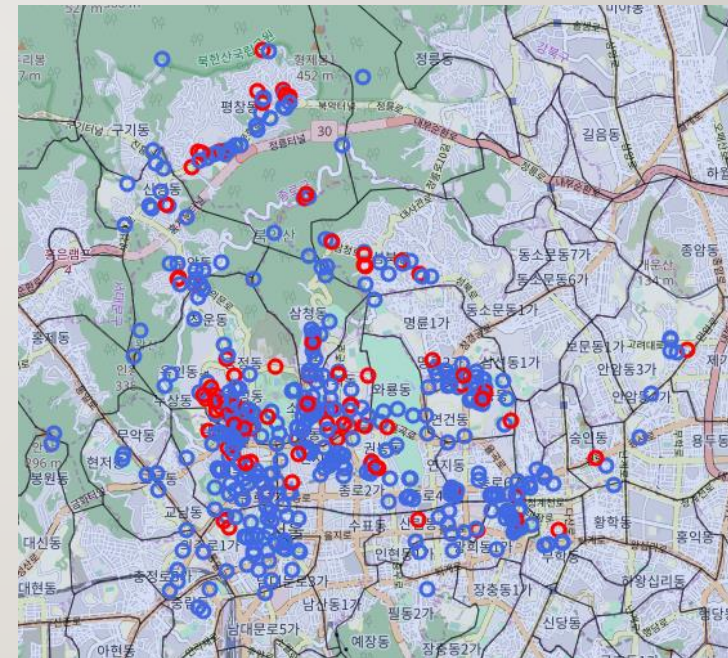
- Dataset 2: Foursquare venue dataset

Category Name	# of venues
Korean Restaurant	643
Café	285
Coffee Shop	270
Chinese Restaurant	217
Japanese Restaurant	180
...	...

EXAMPLE - JONGNO-GU

```
1 df_jongno.categories.value_counts().to_frame().head(10)
```

	categories
	Korean Restaurant 56
	Café 36
	Coffee Shop 29
	Historic Site 23
	Italian Restaurant 14
	Art Museum 13
	Chinese Restaurant 12
	Bakery 12
	BBQ Joint 12
	Art Gallery 12



Blue circles mean Coffee shop venues
Red circles mean Not coffee shop venues of Jongno-gu

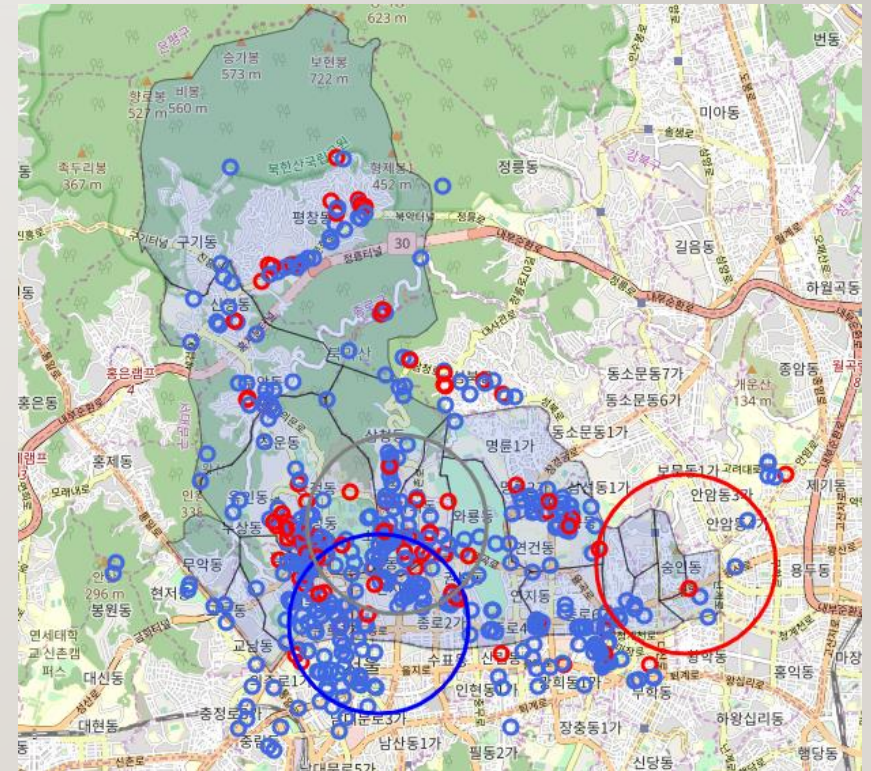
EXAMPLE - JONGNO-GU

- Coffee shop and Not Coffee shop count.
- With many Not Coffee shop, and few Coffee shop can get high score.

	dong	dong_eng	lat	lng	district	cafe_count	non_cafe_count	score
158	종로1가	Jongno 1(il)-ga	37.570698	126.980334	종로구	19	108	89
189	화동	Hwa-dong	37.580686	126.982610	종로구	24	94	70
153	재동	Jae-dong	37.578159	126.985253	종로구	24	82	58
193	효자동	Hyoja-dong	37.582704	126.971898	종로구	28	86	58
145	이화동	Ihwa-dong	37.577325	127.005471	종로구	7	64	57
159	종로5가	Jongno 5(o)-ga	37.570730	127.003350	종로구	6	61	55
176	평동	Pyeong-dong	37.567673	126.966835	종로구	8	63	55
10	계동	Gye-dong	37.582904	126.986877	종로구	19	73	54
75	사직동	Sajik-dong	37.575384	126.965826	종로구	24	77	53
4	가회동	Gahoe-dong	37.582806	126.984865	종로구	19	72	53
17	교남동	Gyonam-dong	37.568435	126.964474	종로구	8	54	46
169	창신동	Changsin-dong	37.576003	127.013525	종로구	5	34	29
79	삼청동	Samcheong-dong	37.589878	126.981380	종로구	8	33	25
185	혜화동	Hyehwa-dong	37.587822	127.002323	종로구	6	31	25
174	청운동	Cheongun-dong	37.589029	126.968516	종로구	12	28	16
69	부암동	Buam-dong	37.593496	126.967285	종로구	4	19	15
57	무악동	Muak-dong	37.576791	126.958227	종로구	4	16	12
177	평창동	Pyeongchang-dong	37.613968	126.974302	종로구	8	18	10
101	송인동	Sungin-dong	37.576675	127.019065	종로구	2	10	8

EXAMPLE - JONGNO-GU

- “Jongno I(il)-ga” get the highest score, and “Sungin-dong” get the lowest score. Figure shows venues of Jongno-gu.
- Blue circle represents “Jongno I(il)-ga”, the best place for Coffee shop in Jongno-gu
- Grey circle represents “Hwa-dong”, the 2nd best place
- Red circle represents “Sungin-dong”, the worst place.

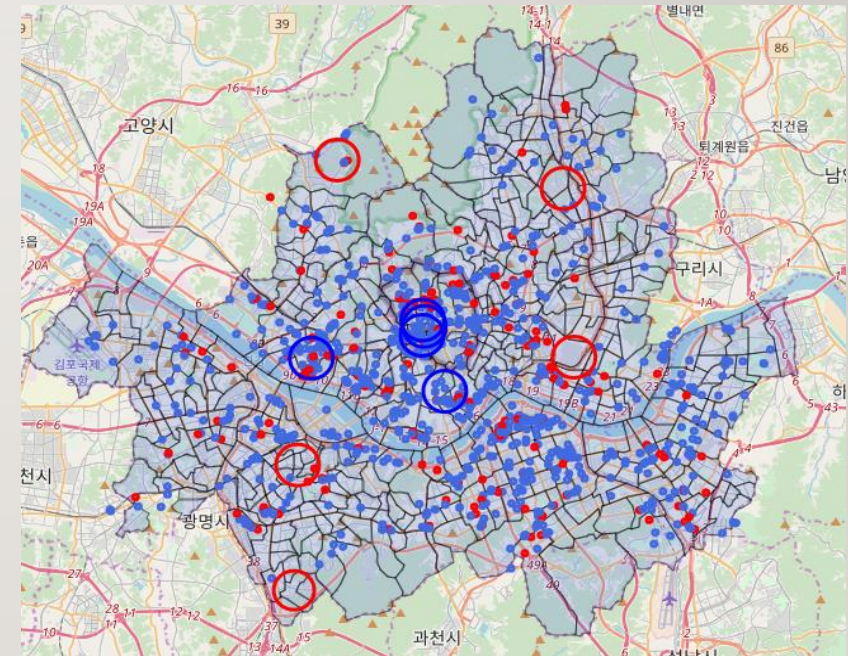


RESULT

```
1 df_result.sort_values(['score', ascending=False])
```

	dong	dong_eng	lat	lng	district	cafe_count	non_cafe_count	score
158	종로1가	Jongno 1(il)-ga	37.570698	126.980334	종로구	19	108	89
144	이태원동	Itaewon-dong	37.538862	126.992278	용산구	23	107	84
86	서교동	Seogyo-dong	37.553650	126.920080	마포구	42	120	78
95	소공동	Sogong-dong	37.563898	126.979989	중구	13	91	78
33	다동	Da-dong	37.567883	126.981194	중구	15	90	75
...
96	송정동	Songjeong-dong	37.554104	127.062161	성동구	2	2	0
103	신길동	Singil-dong	37.505826	126.912651	영등포구	1	1	0
102	시흥동	Siheung-dong	37.449703	126.910697	금천구	1	1	0
139	월계동	Wolgye-dong	37.629556	127.056253	노원구	1	1	0
167	진관동	Jingwan-dong	37.642252	126.934085	은평구	6	5	-1

198 rows x 8 columns



Blue circles mean 5 best places for Coffee shop
Red circles mean 5 worst places for Coffee shop in Seoul

DISCUSSION

- Although the results have been obtained, it should be noted that there is a problem with the dataset. In particular, there is a lack of venue datasets.
- Korean venues are not registered because this service is not used much in Korea.
- And because famous places have a lot of venue data, and few places don't, I think this imbalance has had a huge impact on the results.
- According to recent Korean statistics, the number of coffee shops in Seoul is close to 20,000. Therefore, it is necessary to interpret the results by referring to these points.

