**Introduction & Business Problem**

In this project, I'll try to find the best location to open a cafe.

The candidate locations are two universities in Seoul, Korea. One is around Sogang University and the other is around Korea university.

When it comes to the location of cafe, the most important thing to consider is that it shouldn't be crowded with other cafes nearby.

So my goal is finding the best location to open a cafe which is

1. Not so much crowded with other cafes nearby
2. Either around Sogang university or Korea university.

# Data[¶](https://render.githubusercontent.com/view/ipynb?commit=5092f46b33e946b03b28e02bb92d364479c69171&enc_url=68747470733a2f2f7261772e67697468756275736572636f6e74656e742e636f6d2f6a776f6f6e676b696d31312f436f7572736572615f43617073746f6e652f353039326634366233336539343662303362323865303262623932643336343437396336393137312f556e7469746c656431392e6970796e62&nwo=jwoongkim11%2FCoursera_Capstone&path=Untitled19.ipynb&repository_id=242755651&repository_type=Repository#Data)

Datas that should be collected is as follows

1. Number of existing cafes in the neighborhood
2. Distance either from Sogang University or Korea university
3. Score based on the distance between existing cafes and its center location(Sogang university or Korea university)

# Methodology

1. Get the latitude, longitude data of each locations
2. Search cafes nearby using foursquare
3. Calculate the number of cafes nearby as well as the distance from the ceter location
4. Calculate scores which represents the crowdedness of cafes in the area based on its distance from the center location
5. Choose the one with the lower score

# Analysis

Using the folium maps and foursquare API, it turned out that the cafes of those two locations are as follows.

텍스트, 지도이(가) 표시된 사진

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Figure 1 Cafes near Sogang univ

텍스트, 지도이(가) 표시된 사진

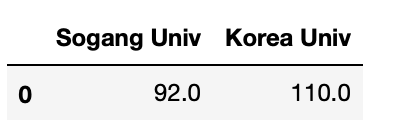
자동 생성된 설명

Figure 2 Cafes near Korea univ

Each cafes around the areas should be assessed differently. So I will score each cafes' location based on their distance from the center. The closer they are, the higher score they will get, so that the place with lower total score could mean that they are less crowded with cafes nearby and it will be the optimum location to open a cafe.

# Results

Sogang university got 92 while Korea university 110. It means that Sogang university is less crowded with cafes nearby



# Discussion & Conclusion

In my analysis, it turned out that Sogang university is better place to open a cafe, rather than Korea university based on the score drawn out as above