

# Finding a Place to Build a Hospital

Sujin Lee

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## 1. Introduction

### 1.1 Background

Being able to get adequate medical care is the most important concern for certain people. In Korea, the burden of hospital bills is relatively small, but the distance between the major areas of activity and the hospital affects whether the individual can receive medical services because taking the time to go to the hospital itself causes difficulties in maintaining work and living conditions.

### 1.2 Problem & Interest

So, for those who don't get proper treatment and are getting worse and worse, placing a sufficient number of hospitals in an appropriate location will help expand medical services. Therefore this project aims to find a place to build a hospital, spreading the use and supply of medical services.

## 2. Data acquisition and cleaning

### 2.1 Data sources

I will use data on hospital location from Foursquare API. Detailed usage is the same as the lab 'Foursquare API' in the second week of this class 'Applied Data Science Capstone'.

In this coursera project, I'm going to focus on Gangwon Province. This city is one of the cities of Korea, and was the least populated area in 2018 research. To proceed this project, I will check the distribution of hospitals in that city.

So I try to target the area closest to people's residential areas among the areas with the least hospitals.

So I use the data about location of hospitals from Foursquare API. I was about to use the data about location of residential areas too, but the data was insufficient, thus I got distribution chart of residential areas from searching it.

### 2.2 Data cleaning

I eliminated inaccurate or unrelated areas of the data obtained from Foursquare API. And based on the lab, I cleaned the data so that the location information remains.

## 3. Analysis

By using the data, I visualize the location around Gangwon Province. The result image is in my notebook, 'Coursera\_Capstone\_Project'.

Here is the link:

[https://github.com/leesjin1219/Coursera\\_Capstone/blob/master/Coursera\\_Capstone\\_Project.ipynb](https://github.com/leesjin1219/Coursera_Capstone/blob/master/Coursera_Capstone_Project.ipynb)

#### **4. Results and Conclusion**

As seeing from the mapping results, medical centers and residential areas are mainly distributed in areas outside Gangwon Province.

They are largely identical. There is no hospital near the apartment area located across Gangwon Province.

Therefore, i concludes that to expand the use and supply of medical centers, optimum location is around 평창(Pyeongchang).