IBM capstone Project Course Week 4 Assignment

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Project Title: Predict the Best District for the House Investment Based on the infrastructure facility by using the Regression Technique

Introduction

Housing is not only the basic commodity for our life but also one of the best investment asset. Therefore, we need to choose wisely before buying it. Unfortunately, besides the house cost, understanding the value of the house is also quite challenging. The value of the house can change from time to time. There are a lot of factors that can change the value of the house. For example, the houses located in a large city usually have a higher value than others, but the cost can be downgraded if the neighborhood lack of public facilities. On the other hand, the house in the rural area can increase dramatically if the government suddenly plans to build a new subway station around that area.

The current twenties generation in Koreans has this issue right now. Right now they work hard so they can buy a new house in the prime area for their future. In this study, the machine learning technique will be used to predict the best location for their housing investment. We will investigate how the public facility in every district in South Korea was developing in the last 10 years. Finally, we will recommend the best district for the housing investment that may keep growing.

Business Problem

The objective of this capstone project is to analyze and select the best housing investment district in South Korea. Using data science methodology and machine learning techniques like regression, this project aims to provide solutions to answer the business question: If I want to buy the house right now, where is the best place so my investment can keep growing from time to time. The main assumption of this study is if the public facilities are growing from year to year, then that area can be recognized as a good place for the investment area. We will simplify our study only in the public infrastructure sector and dismiss the political, social, and even economic factors.

Target Audience of this project

This project is particularly useful to the younger generations in South Korea to decide the location of their future house. Like another advanced country, the property price in South Korea is one of the most expensive in the world. By looking at the economic condition of each person, one family can only afford to buy no more one house. Therefore, the decision about the house location is

really important and hopefully, this study can become help them to analyze the value of the property based on the surrounding infrastructure only.