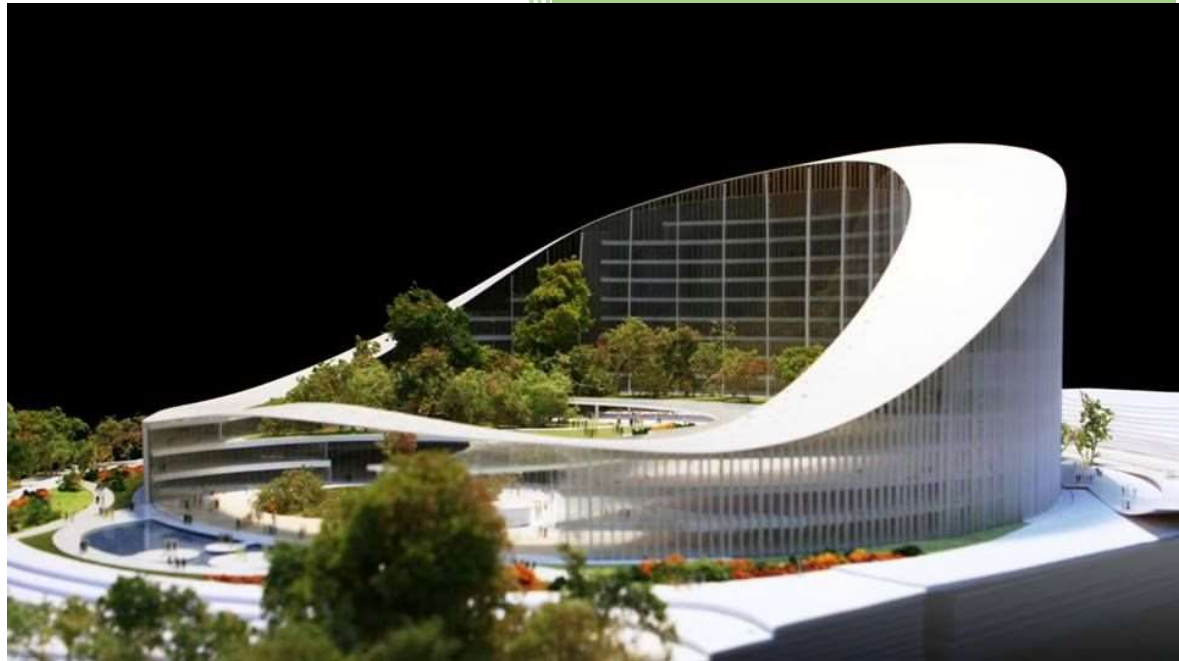


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Coursera Capstone IBM Applied Data Science



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Introduction:

For many patients

Algeria is the largest country in Africa and is estimated to have a population of around 40 million people. Algeria has a public health care system, which is accessible and free of charge to all citizens of Algeria. The public health care system is financed by the government of Algeria.

The COVID-19 push us to think about a new hospital with more beds including technology to provide a great service to our citizens.

However, opening a new hospital requires serious consideration and is a lot more complicated than it seems. Particularly, the location of the shopping mall is one of the most important decision that will determine whether the hospital will be a success or failure.

Business problem:

The Objective of this capstone project is to analyze and select the best locations in the City of Algiers to open new Hospital

Using data science methodology and machine learning techniques like clustering, this project aims to provide solution to answer the business question:

Is it the perfect location? Where would you like that they open it?

Data:

To solve the problem, we will need the following data:

1-population of the area where hospital is recommended to be build.

2-latitude and longitude coordinates of those neighborhoods, this is required in order to plot the map and also get the venue data

3-get the venue data, which is related to hospital, we will use this data to perform clustering on the area.

Source of data and methods to extract:

Source of the data will be from an excel file, excel file provides the data of that area.

We will use web scraping techniques to extract the data from the excel file using the python requests and beautiful soup package,

After we will get the geographical coordinates of the area using the python Geocoder package.

We will use the foursquare API to get the venue data for that area

foursquare has one of the largest databases of 4 million places and used by over 80000 developers.

Foursquare API will provide many categories of the venue data, we are interested in the Hospital.

Using the methodology section where we will discuss the steps taken in this project.

Data analysis that we did and the machine learning technique that was used.