

## Project Title

# Construction of Hospitals Dependence on State County Demographic Data

## Introduction Section

This is a description of the problem and a discussion of the background. Here I will discuss the business problem and who would be interested in this project.

A group of potential investors are looking into the possibility of building new, for-profit hospitals in various counties in the Commonwealth of Pennsylvania.

These investors want to know, based on specific state demographic data, how they can arrive at an accurate decision before providing the funding for this type of venture.

The investors want to base their decision on county population, median family income and the number of already-existing hospitals in the same county.

The investors want to make sure that the county that they plan to build and open the new hospital has an adequate population as well as a population that has enough potential income to support the revenue streams of the hospital. The investors also want to avoid building new facilities where there might be too much competition which could eventually drive down revenue streams and profitability and ruin any chance of a return on their investment. Thus the need for this project.

## Data Section

This is a description of the data and how it will be used to solve the problem. This is where I describe the data that will be used to solve the problem and the source of the data.

The data used to help in the final investor decision-making process will come from two sources:

- a. The World Wide Web which has web sites that contain Pennsylvania state county demographic table data such as county population, median family income and latitude and longitude coordinates of each county.
- b. The Foursquare location data that will provide the number of hospitals in each of the Pennsylvania state counties. The county latitude and longitude coordinates from the web-based table data will be used as some of the parameters sent to the Foursquare API.

These two data sources will help the investors to decide if it will be worth the financial investment for them to proceed with the construction and opening of new hospitals in a particular county.

Median Family Income must be at a certain high level as well as a certain county population high level. In addition, the number of already-existing hospitals must not be *above* a certain level also.

## **Methodology Section**

To Be Provided In Week 5. This section represents the main component of the report where I discuss and describe any exploratory data analysis that I did, any inferential statistical testing that I performed, if any, and what machine learnings were used and why.

## **Results Section**

To Be Provided In Week 5. This section is where I discuss the results.

## **Discussion Section**

To Be Provided In Week 5. This section is where I discuss any observations I noted and any recommendations I can make based on the results.

## **Conclusion Section**

To Be Provided In Week 5. This section is where I conclude the report.