

Visualizing And Predicting Heart Diseases

With An Interactive Dashboard

Proposed Solution:

- The leading cause of death in the developed world is heart disease. Therefore, there needs to be work done to help prevent the risks of having a heart attack or stroke.
- This database contains of 14 fields. The "goal" field refers to the presence of heart disease in the patient. It is integer valued from 0 (no presence) to 4.

The data dictionary is as follows:

S.No	Field Name
1	Age
2	Sex
3	Chest pain type
4	BP
5	Cholesterol
6	FBS over 120
7	EKG results
8	Max HR
9	Exercise angina
10	ST depression
11	Slope of ST
12	Number of vessels fluro
13	Thallium
14	Heart Disease

- Use this dataset to predict which patients are most likely to suffer from a heart disease in the near future using the features given.

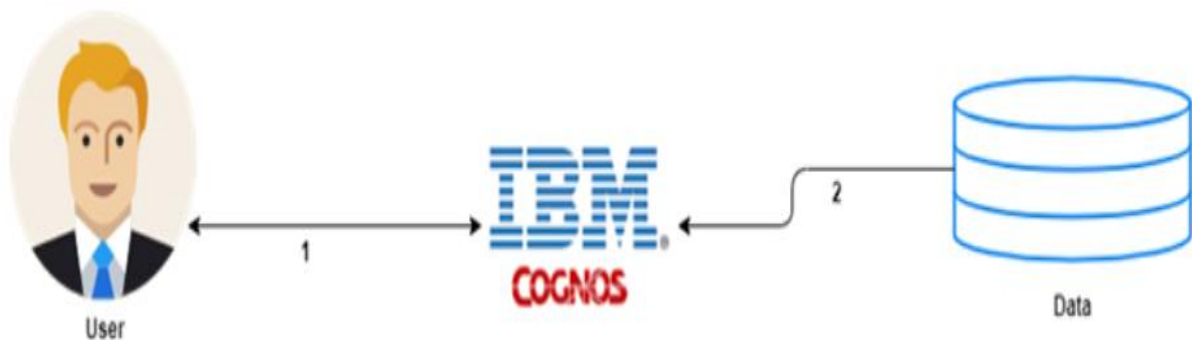
Novelty:

- Heart diseases are the most common cause of death worldwide over the last few decades in the developed as well as underdeveloped and developing countries. Early detection of cardiac diseases and continuous supervision of clinicians can reduce the mortality rate. However, it is not possible to monitor patients every day in all cases accurately and consultation of a patient for 24 hours by a doctor is not available since it requires more sapience, time and expertise. In this project, we have developed and researched about models for heart disease prediction through the various heart attributes of the patient and we are going to create the interactive dashboard through which we can analyse the heart diseases based on age, sex, blood pressure of a person, etc. Dataset available publicly in Kaggle Website, further evaluating the results using confusion matrix and cross-validation.

Feasibility of the idea:

- Know fundamental concepts and can work on IBM Cognos Analytics, Gain a broad understanding of plotting different visualizations to provide a suitable solution. Able to create meaningful Visualizations and Dashboard(s). We consider a dataset which is having 14 fields by using that we are going to do explorations and building visualizations so that we can analyse the heart diseases of the patient.

Business Models :



Scalability Of The Solution:

- We are going to do explorations and visualizations ,Exploration of bp versus chest paintype and gender ,Exploration of max heart rate during the chest pain,Exploration of BP by age,Exploration of cholestrol by age and gender these are the explorations we are going to use.
- Average age for different chest pain types,Average exercise angina during chest pain,BP variation with respect to age,Effort of existing heart disease on average of exercise angina , Average age for different types of chest pain in existing heart diseases , Maximum heart rate in existing heart disease by exercise angina these all are the visualizations.