# Visualizing and Predicting Heart Diseases with an Interactive Dash Board

**SUBMITTED BY**


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# PROBLEM STATEMENTS

1.Recent research in the field of medicine has been able to identify risk factors that may contribute toward the development of heart disease but more research is needed to use this knowledge in reducing the occurrence of heart diseases. Diabetes, hypertension, and high blood cholesterol have been established as the major risk factors of heart diseases. Life style risk factors which include eating habits, physical inactivity, smoking, alcohol intake, obesity is also associated with the major heart disease risk factors and heart disease. There are studies showing that reducing these risk factors for heart disease can actually help in preventing heart diseases. There are many studies and researches on the prevention of heart disease risk.

2.Data from studies of population has helped in prediction of heart diseases, based on blood pressure, smoking habit, cholesterol and blood pressure levels, diabetes. Researchers have used these prediction algorithms in adapted form of simplified score sheets that allow patients to calculate the risk of heart diseases. The Framingham Risk Score (FRS) is a popular risk prediction criterion which is used in algorithms for heart disease prediction. This study aimed at developing an intelligent system based on classification algorithms for the prediction of heart disease based on risk factors categories.

3.Heart disease can be managed effectively with a combination of lifestyle changes, medicine and, in some cases, surgery. With the right treatment, the symptoms of heart disease can be reduced and the functioning of the heart improved. The predicted results can be used to prevent and thus reduce cost for surgical treatment and other expensive.

4.The overall objective of my work will be to predict accurately with few tests and attributes the presence of heart disease. Attributes considered form the primary basis for tests and give accurate results more or less. Many more input attributes can be taken but our goal is to predict with few attributes and faster efficiency the risk of having heart disease. Decisions are often made based on doctors' intuition and experience rather than on the knowledge rich data hidden in the data set and databases. This practice leads to unwanted biases, errors and excessive medical costs which affects the quality of service provided to patients.