A Heart Disease Prediction Model using Web Application

Chanchal Singh[1] Pyuish Rai[2]
[1]M. Tech Student [2]Assistant Professor
[1,2]Department of Computer Science
[1,2]Institute of Engineering & Technology Dr RL Avadh University Ayodhya, India

Abstract— In this paper, Aim of study to provide give a web application that allows user to get instant guidance on their heart diseases through an intelligent system online. To achieve our goal we have set the following objectives. It might have happened so many times that you or someone yours need doctors help immediately, but they are not available due to some reason. The Heart Disease Prediction application is an end user support and online consultation project. The Application allows user to share their heart related issues. It then processes user specific details to check for various illness that could be associated with it. Here we use some intelligent data mining techniques to guess the most accurate illness that could be associated with patient's details. Based on result, system automatically Here, we propose a web application that allows users to get instant guidance on their heart disease through an intelligent system online. The application is fed with various details and the heart disease associated with those details. The application automatically shows the result specific doctors for further treatment. The system allows user to view doctor's details.

Keywords: Data mining, Heart diseases, web application, feature extraction

I. INTRODUCTION

"Data Mining is a non-trivial extraction of implicit, previously unknown and potential useful information about data . In short, it is a process of analyzing data from different perspective and gathering the knowledge from it. The discovered knowledge can be used for different applications for example healthcare industry." Nowadays healthcare industry generates large amount of data about patients, disease diagnosis etc. Data mining provides a set of techniques to discover hidden patterns from data. The diagnosis of heart disease in most cases depends on a complex combination of clinical and pathological data; this complexity leads to the excessive medical costs affecting the quality of the medical care. It shows one third American adult have one or more types of heart diseases based on American Heart Association report. Computational biology is often applied in the process of translating biological knowledge into clinical practice, as well as in the understanding of biological phenomena from the clinic.

II. THE RISK FACTOR OF HEART DISEASE

A. Family History of Heart Disease:

most people know that the heat disease can run in families. That if anybody has a family history of heart disease, he/she may be at greater risk for heart attack, stroke and other heard diseases.

B. Smoking:

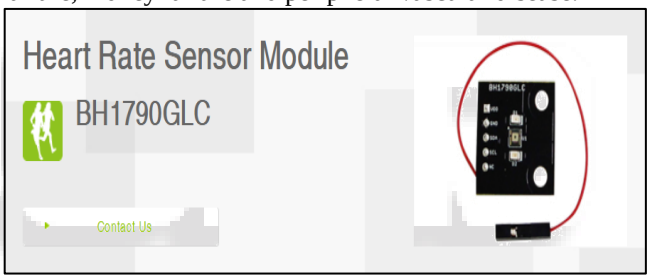
smoking is major cause of heart attack, stroke and other peripheral arterial disease. Nearly 40% of all people who die from smoking tobacco do so due of heart and blood vessel diseases. A smoker's risk of heart attack reduces rapidly after only one year of not smoking.

C. Cholesterol:

abnormal levels of lipids (fats) in the blood are risk factor of heart diseases. Cholesterol is a soft, waxy substance found among the lipids in the bloodstream and in all the body's cells. High level of triglyceride (most common type of fat in body) combined with high levels of LDL (low density lipoprotein) cholesterol speed up atherosclerosis increasing the risk of heart diseases.

D. High blood pressure:

High blood pressure also known as HBP or hypertension is a widely misunderstood medical condition. High blood pressure increase the risk of the walls of our blood vessels walls becoming overstretched and injured. Also increase the risk of having heart attack or stroke and of developing heart failure, kidney failure and peripheral vascular disease.



E. Previous used technology:

The health care industries collect huge amount of data that contain some hidden information ,which is useful for making effective decision .for providing appropriate result and making effective decision on data ,some advanced data mining technique are used .In this study ,an effective heart disease prediction system is developed using neural network for predicting the rislk level of heart disease .the system use 15 medical parameter such as age ,sex ,blood ,cholesterol and obesity for prediction.

III. FACTORS LEADS TO HEART DISEASES AND TREATMENTS TO AVOID THEM

There are number of factors that increase the risk of heart disease. These factors lead to the heart problems and diseases. These factors are Family History, Hyper Tension, Blood Pressure, Cholesterol, Smoking or Tobacco, Poor or Unhealthy Diet, Physical Inactivity etc. In early stages many Heart Diseases can be avoid by the patients by simply preventing or controlling, prevention measures include regular exercise, healthy and well balanced diet, avoid smoking, maintaining the normal healthy weight etc. Risk factors such as diabetes, cholesterol, hyper-tension etc can also be control or prevented through regular medicine care and by changing life style. Critical type of heart disease such

as heart attack, heart failure or stroke required hospitalization and the treatment for these diseases include supplement amount of oxygen that is deliver to the heart tissues. It also includes monitoring of vital signs and advance life support measures.

IV. OVERVIEW OF HEART DISEASES

Human's life fully depends upon the efficient working heart without any break or pause. The term heart or cardio disease refers to such disease that related to the heart and its blood circulatory system. It is a general name for a wide variety of diseases and disorders that affect the heart and sometimes the blood vessels as well. These are caused by disorder of heart and its pumping system. That may results illness, disability or may be death.

V. RESULT

The Aim of study to provide a web application that allows user to get instant guidance on their heart diseases through an intelligent system online. The Application allows user to share their heart related issues and application is fed with various details and the heart disease associated with those details. It automatically shows the result specific doctors for further treatment. The system allows user to view doctor's details. The system can be used in case of emergency.

VI. CONCLUSION

Heart disease is one of the mjorconcern of society today. It is difficult to manually determine the odds of getting heart based on risk factor. However the web application are useful to predict the output for extraction of data. Here we use some intelligent data mining techniques to guess the most accurate illness that could be associated with patient's details then processes user specific details to check for various illness that could be associated with it.

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