PREDICTION ANALYSIS USING SVM IN CARDIOVASCULAR AILMENTS

AIM

A key challenge is to know the heart disease prediction of a patient with the best accuracy in the coming 10 years based on the patient's details and habit.

INTRODUCTION

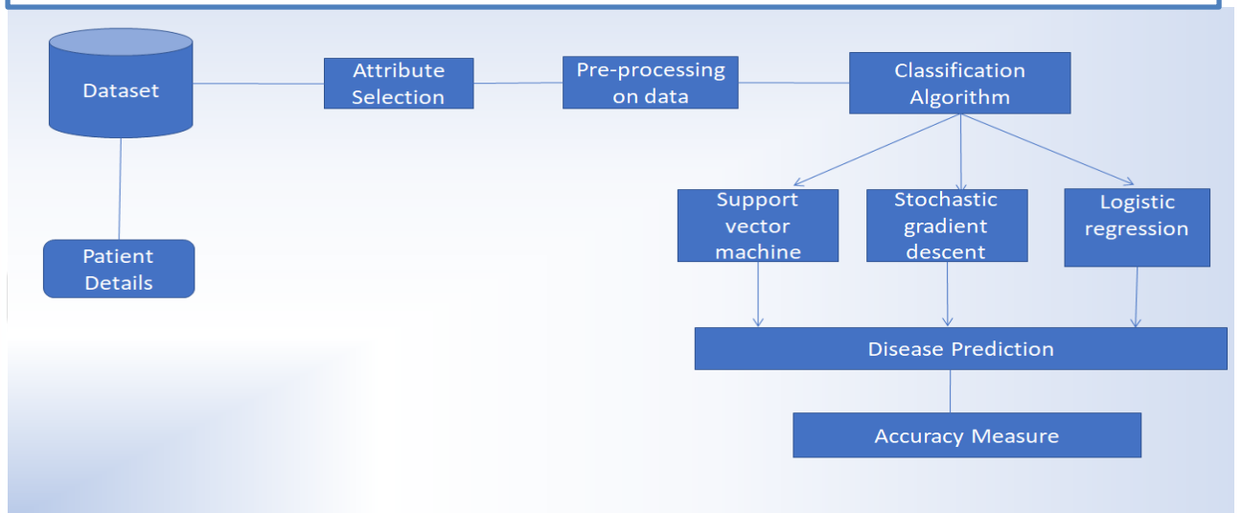
The problem is to predict whether patients have heart disease by giving some features of users. This is important to the medical field. The human heart is the principal part of the human body. It regulates blood flow throughout our body. Any irregularity to the heart can cause distress in other parts of the body. Any sort of disturbance to the normal functioning of the heart can be classified as Heart disease. When a patient without heart disease is diagnosed with heart disease, he will fall into unnecessary panic and when a patient with heart disease is not diagnosed with heart disease, he will miss the best chance to cure his disease. Such a wrong diagnosis is painful to both patients and hospitals.

ML techniques help in heart disease prediction and early diagnosis. The input to the algorithm is 16 features with number values. Logistic Regression, SVM, Stochastic gradient descent algorithms are to output a binary number 1 or 0. 1 indicates the patient has heart disease and vice versa.

ARCHITECTURE

Methodology

The proposed work makes an attempt to detect these heart diseases at an early stage to avoid disastrous consequences. Records of large sets of medical data created by medical experts are available for analyzing and extracting valuable knowledge from it. Data mining techniques are the means of extracting valuable and hidden information from the large amount of data available. Mostly the medical database consists of discrete information. Hence, decision making using discrete data becomes a complex and tough task.

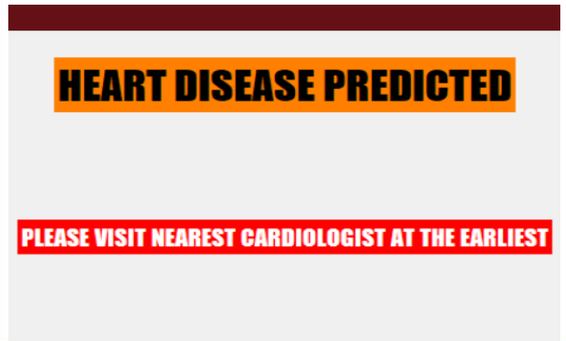


The technique which is developed is taking input as the details of the patient and compares the details from the dataset using classification algorithms. After the prediction of input details, it gives the output as to whether a patient has heart disease or not..

It has two modules in the project.
1. Gathering the details of the patient.
2. Heart Disease prediction

RESULT

Accuracy: 0.8561320754716981



CONCLUSION

The prediction model for Cardiovascular diseases is a GUI-based, user-friendly system. The proposed working model can also help in reducing treatment costs by providing initial diagnostics in time. The model can also serve the purpose of a training tool for medical students and will be a soft diagnostic tool available for physicians and cardiologists.

REFERENCES

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