LITERATURE SURVEY ON PREDICTING HEART DISEASE

INTRODUCTION:

Heart disease defines a range of conditions that affect human heart. The name "heart disease". Heart disease is a term that allow to a large number of medical circumstances related to heart. Heart disease generally allows to some conditions that involve narrowed or blocked blood vessels which can lead to a heart attack, stroke or chest pain. Other heart conditions, such as those that affect your heart's muscle, valves or rhythm, also are considered forms of heart disease.

Data mining, machine learning and Big Data play an important role in building an predictive model for medical system to predict heart disease or cardiovascular disease, where Data mining is a non-trivial extraction of implicit, previously unknown potential useful information called as knowledge from the medical data using complex algorithms, Big data (BD) can be referred as huge record of information set. The useful patterns with hidden patterns, unknown correlations are analytically handled for making knowledgeable decision through this Big Data analytics process.

EXISTING SOLUTIONS:

1. Effective Heart Disease Prediction Using Hybrid Machine Learning Techniques" proposed by Senthil Kumar Mohan, Chandrasegar Thirumalai et al. (2019) was efficient technique using hybrid machine learning methodology. The hybrid approach is combination of random forest and linear method. The dataset and subsets of attributes were collected for prediction.

The subset of some attributes was chosen from the pre-processed knowledge(data) set of cardiovascular disease. After prep-processing, the hybrid techniques were applied and diagnosis the cardiovascular disease.

2. K. Prasanna Lakshmi, Dr. C.R.K. Reddy (2015) designed “Fast Rule-Based Heart Disease Prediction using Associative Classification Mining”. In the proposed Stream Associative Classification Heart Disease Prediction (SACHDP), we used associative classification mining over landmark window of data streams. This paper contains two phases: one is generating rules from associative classification mining and next one is pruning the rules using chi-square testing and arranging the rules in an order to form a classifier. Using these phases to predict the heart disease easily.

3. M.Satish, et al. (2015) used different Data Mining techniques like Rule based, Decision Tree, Naive Bayes, and Artificial Neural Network. An efficient approach called pruning classification association rule (PCAR) was used to generate association rules from cardiovascular disease warehouse for prediction of Heart Disease. Heart attack data warehouse was used for pre-processing for mining.

4. Lokanath Sarangi, Mihir Narayan Mohanty, Srikanta Pattnaik (2015) “An Intelligent Decision Support System for Cardiac Disease Detection”, designed a cost-efficient model by using genetic algorithm optimizer technique. The weights were optimized and fed as an input to the given network. The accuracy achieved was 90% by using the hybrid technique of GA and neural networks.

5. “Prediction and Diagnosis of Heart Disease by Data Mining Techniques” designed by Boshra Bahrami, Mirsaeid Hosseini Shirvani. This paper uses various classification methodology for diagnosing cardiovascular disease. Classifiers like KNN, SVO classifier and Decision Tree are used to divide the datasets. Once the classification and performance evaluation the Decision tree is examined as the best one for cardiovascular disease prediction from the dataset.

CONCLUSION:

Use of big data, machine learning along with data mining can provide promising results to bring the most effective accuracy in analysing the prediction model. The main aim is diagnosing he cardiovascular disease or the heart disease and using different methods and many approaches to get prediction.

REFERENCES:

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