Literature survey

Visualizing and Predicting Heart Diseases with an Interactive Dash Board.

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1Ahmed M. Khedr: Zaher Al Aghbari; Amal Al Ali: Mariam Eljamil," Predicting the model will form a basis for predicting the chances of occurrence of Cardio Vascular Disease (CVD) in people using classification techniques within fifty years of age",2020-IEEE.

The model will form a basis for predicting the chances of the occurrence of CVD. If a person's data are given the classifier will predict if he is liable for CVD or not. The output is a binary classification which will give 1 or 0; 1 being the chances to occur and 0 being the chances not to occur.

2ImranChowdhury; Abdul Moeid; Enamul Hoque; Muhammad Ashad Kabir; Md. Sabir Hossain; Mohammad Mainul Islam," Designing and Evaluating Multimodal Interactions for facilitating VisualAnalysis With Dashboards",2020-IEEE.

In the context of past interactions, the system incorporates previous utterances and direct manipulations made by the user within a finite-state model.

3-D. Karthick; B. Priyadharshini," An Efficient Association Rule Mining From Distributed MedicalDatabases for Predicting Heart Diseases",2022-IEEE.

The proposed association rule mining methodology will be used for heart disease prediction using real heart disease data. These real data exist at different clinics and cannot be moved to a central site. The proposed model protects patient data privacy and achieves thesame results as if the data are moved and joined at a central site.

4-Md. Touhidul Islam, Sanjida Reza Rafa, et al, "Early Prediction of Heart Disease Using PCA and Hybrid Genetic Algorithm with k-Means", 2021.

Worldwide research shows that millions of lives are lost per year because of heart disease. The healthcare sector produces massive volumes of data on heart disease that are sadly not used to locate secret knowledge for successful decision-making. One of the most important aspects at this moment is detecting heart disease at an early stage. Researchers have applied distinct techniques to the UCI Machine Learning heart disease dataset. Many researchers have tried to apply some complex techniques to this dataset, where detailed studies are still missing. In this paper, Principal Component Analysis (PCA) has been used to reduce attributes. Apart from a Hybrid genetic algorithm (HGA) with k-means used for final clustering. We used the Hybrid Genetic Algorithm (HGA) for data clustering to avoid this problem. Our proposed method can predict early heart disease with an accuracy of 94.06%.

5-Mohini Chakarverti, Saumya Yadav, et al, "Classification Technique for Heart Disease Prediction in Data Mining", 2019.

Currently, a lot of methods have been implemented for prediction analysis. In the proposed study, clustering and classification of the input information for heart disease forecasting is executed with the help of the k-means clustering algorithm and SVM (support vector machine) classification model on the basis of prediction analysis methods. The backpropagation algorithm along with k means a clustering algorithm is applied for the clustering of information. These algorithms support to enhance the precision of prediction analysis. A heart disease data suite obtained from the UCI repository is used for judging the performance of a proposed algorithm. This data suite comprises a total of 76 features. But, whole tests require a subset of 14 features. A comparison between The proposed study and the earlier method (using the arithmetic mean) is performed in terms of certain parameters such as accuracy, error recognition rate, and execution time.

6-**Lakshmi Prasad Koyi, Tejaswi Borra "A Research Survey on State of the art Heart Disease Prediction Systems", 2021.**

Disease prediction systems are the better alternatives, to avoid human errors in disease diagnosis and also assist in disease prevention with early detection. High demand in preventing the rapidly increasing heart disease death tolls expanded the horizons of the former research scholars for introducing intelligent heart disease prediction systems. Prediction of heart disease from patient's health record attributes is, a proven multi-dimensional decision-making the system, which merely depends on mining attribute correlations too. Patient Health Records (PHRs) with structured categorical data and unstructured text/image data are the major input resources for heart disease prediction. Heart disease dataset preparation, prediction system's process flow design, process execution, and results evaluation are the most common life cycle modules of any heart disease prediction system. Although much former research introduced various heart disease prediction models, they are still suffering from some common set of problems. Input dataset attributes modeling, attribute risk factor calculation, correlations mining; threshold determination, and achieving high accuracy in disease prediction are the major limitations of the existing heart disease prediction systems. As part of my research on designing intelligent heart disease prediction models, several research papers are analyzed and narrated that knowledge in a proper manner with a detailed description. The main objective of this study is to represent the current scenario of heart disease prediction systems and their associated modules in brief.

7-**A. Lakshmanarao, A. Srisaila, "Heart Disease Prediction using Feature Selection and Ensemble Learning Techniques", 2021.**

Cardiovascular diseases (heart-related diseases) are the reason for the deaths of 18 million people every year in the world. According to WHO,31% of deaths worldwide are due to heart-related diseases. In this paper, we proposed a novel machine-learning model for heart disease prediction. The proposed method was tested on two different datasets from Kaggle and UCI. We applied sampling techniques to the unbalanced dataset and feature selection techniques are used to find the best features. Later several classifier models were applied and achieved good accuracy with the ensemble classifier. The experimentations on two datasets show that the proposed model is effective for heart disease prediction. Python was used for all implementations.