VISUALIZING AND PREDICTING HEART DISEASES WITH AN INTERACTIVE DASH BOARD

TEAM MEMBERS:

JAI KUMAR C S - 49621915033

MANJULA DEVI M - 49621915040

SIVA SANKARI P - 49621915051

SUSHMITHA K -49621915056

VIGNESH LAKSHMANAN G - 49621915059

VISUALIZING AND PREDICTING HEART DISEASES WITH AN INTERACTIVE DASH BOARD

For the purpose of visualising and predicting cardiac disease, this research employs a variety of data mining approaches using the cognos analytics tool. Data analytics must be used to create a key model for the medical system to predict heart disease or cardiovascular disease. Cardiovascular disease can be detected before or after symptoms appear, which might help patients. One of the main causes of death in the modern world is heart disease. The ability to predict cardiac disease is a significant clinical challenge. However, data mining occasionally uncovers a number of techniques for predicting cardiac disease. This survey covered a wide range of methods for visualising and forecasting cardiac disease.

LITERATURE SURVEY

Aakash Chauhan et al[1] presented "Heart Disease Prediction using Evolutionary Rule Learning". This study eliminates the manual task that additionally helps in extracting the information (data) directly from the electronic records. To generate strong association rules, we have applied frequent pattern growth association mining on patient's dataset. This will facilitate (help) in decreasing the amount of services and shown that overwhelming majority of the rules helps within the best prediction of coronary sickness likewise **Ashir Javeed, Shijie Zhou et al [2]** designed "An Intelligent Learning System based on Random Search Algorithm and Optimized Random Forest Model for Improved Heart Disease Detection". This paper uses random search algorithm (RSA) for factor selection and random forest model for diagnosing the cardiovascular disease. This model is principally optimized for using grid search algorithmic program wheras **Bo Jin, Chao Che et al [3]** proposed a "Predicting the Risk of Heart Failure With EHR Sequential Data Modeling" model designed by applying neural network. This paper used the electronic health record (EHR) data from real-world datasets related to congestive heart disease to perform the experiment and predict the heart disease before itself. We tend to used one-hot encryption and word vectors to model the diagnosing events and foretold coronary failure events victimization the essential principles of an extended memory network model. By analyzing the results, we tend to reveal the importance of respecting the sequential nature of clinical records. However "Effective Heart Disease Prediction Using Hybrid Machine Learning Techniques" proposed by **Senthilkumar Mohan, Chandrasegar Thirumalai et al [4]** 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 were chosen from the pre-processed knowledge(data) set of cardiovascular disease .After prep-processing , the hybrid techniques were applied and disgnosis the cardiovascular disease likewise **M.Satish, et al [5]** used different Data Mining techniques like Rule based, Decision Tree, Navie Bayes, and Artifical Neural Network. An efficient approach called pruningclassification 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. All the above discussed data mining technique were described wheras **Lokanath Sarangi, Mihir Narayan Mohanty, Srikanta Pattnaik et al [6]** "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. However "Prediction and Diagnosis of Heart Disease by Data Mining Techniques" designed by Boshra **Bahrami, Mirsaeid Hosseini Shirvani et al [7]**. 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. Likewise K**.Prasanna Lakshmi, Dr. C.R.K.Reddy et al [8]** 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 phase to predict the heart disease easily.