

## **LITERATURE SURVEY**

**TITLE:** HEART DISEASE PREDICTION USING EVOLUTIONARY  
RULE LEARNING

**AUTHOR:** Aakash Chauhan

**YEAR:** 2018

**DESCRIPTION:**

Aakash Chauhan et al. (2018) 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 the 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

**TITLE:** PREDICTION AND DIAGNOSIS OF HEART DISEASE BY DATA  
MINING TECHNIQUES

**AUTHOR:** Boshra Bahrami, Mirsaeid Hosseini Shirvani

**YEAR:** 2015

**DESCRIPTION:**

Prediction and Diagnosis of Heart Disease by Data Mining Techniques” designed by Boshra Bahrami, Mirsaeid Hosseini Shirvani. This paper uses various classification methods 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.

**TITLE:** OPTIMIZED RANDOM FOREST MODEL FOR IMPROVED HEART DISEASE DETECTION

**AUTHOR:** Ashir Javeed, Shijie Zhou et al.

**YEAR:** 2017

**DESCRIPTION:**

Ashir Javeed, Shijie Zhou et al. (2017) designed “An Intelligent Learning System based on Random Search Algorithm and Optimized Random Forest Model for Improved Heart Disease Detection”. This paper uses a random search algorithm (RSA) for factor selection and random forest model for diagnosing cardiovascular disease. This model is principally optimized for using grid search algorithmic programs. Two forms of experiments are used for cardiovascular

disease prediction. In the first form, only a random forest model is developed and within the second experiment the proposed Random Search Algorithm based random forest model is developed. This methodology is efficient and less complex than conventional random forest models. Compared to conventional random forest it produces 3.3% higher accuracy. The proposed learning system can help the physicians to improve the quality of heart failure detection

**TITLE:** PREDICTION OF HEART DISEASE USING DATA MINING TECHNIQUE

**AUTHOR:** Mamatha Alex P,Shaicy P Shaji

**YEAR:** 2019

**DESCRIPTION:**

Mamatha Alex P and Shaicy P Shaji (2019) designed “Prediction and Diagnosis of Heart Disease Patients using Data Mining Technique”. This paper uses techniques of Artificial Neural Network, KNN, Random Forest and Support Vector Machine. Comparing with the above mentioned classification techniques in data mining to predict the higher accuracy for diagnosing the heart disease is Artificial Neural Network

**TITLE:** APPLIED DATA MINING AND MACHINE LEARNING  
ALGORITHMS NAMELY DECISION TREE (J48 algorithm), NAIVE  
BAYES AND ARTIFICIAL NEURAL NETWORKS(ANN) FOR HEART  
DISEASE PREDICTION

**AUTHOR:** A.Taneja

**YEAR:** 2013

**DESCRIPTION:**

In 2013, A. Taneja, applied data mining and machine learning algorithms namely Decision Tree (J48 algorithm), Naive Bayes and Artificial Neural Networks (ANN) for heart disease prediction. A dataset of 7339 instance with 15 attributes has been taken from PGI Chandigarh. WEKA 3.6.4 tool was used for the experiment. For model training and testing 10-Fold Cross Validation techniques is used randomly. Best First Search method was used to select the best attributes from the already available 15 attributes and among them only 8 attributes has been selected. Each experiment was done on two different scenarios, first one containing all 15 attributes and the second case only 8 selected attributes. From all these experiments comparative results has been obtained and from these comparative results it has been found that J48 pruned in selected attributes case has performed best in accuracy with 95.56% and Naive Bayes with all attributes case gives less accuracy 91.96% but takes least time

build a model in the whole experiment.

## **REFERENCES:**

[1] Aakash Chauhan , Aditya Jain , Purushottam Sharma , Vikas Deep, “Heart Disease Prediction using Evolutionary Rule Learning”, “International Conference on "Computational Intelligence and Communication Technology” (CICT 2018).

[2] Ashir Javeed, Shijie Zhou, Liao Yongjian, Iqbal Qasim, Adeeb Noor, Redhwan Nour<sup>4</sup>, Samad Wali And Abdul Basit , “An Intelligent Learning System based on Random Search Algorithm and Optimized Random Forest Model for Improved Heart Disease Detection” , IEEE Access 2017.

[3] Senthilkumar Mohan, Chandrasegar Thirumalai, and Gautam Srivastava, “Effective Heart Disease Prediction Using Hybrid Machine Learning Techniques”, IEEE Access 2019.

[4] K.Prasanna Lakshmi, Dr. C.R.K.Reddy, “Fast Rule-Based Heart Disease Prediction using Associative Classification Mining”,

IEEE International Conference on Computer, Communication and Control (IC4-2015). [6] M.Satish, D Sridhar, “Prediction of Heart Disease in Data Mining Technique”, International Journal of Computer Trends & Technology (IJCTT), 2015.

[5] A. Taneja, “Applied Data Mining and Machine Learning Algorithms” namely Decision Tree (J48 algorithm), Naive Bayes and Artificial Neural Networks (ANN) for heart disease prediction(2013).