

# **LITERATURE SURVEY ON VISUALIZING AND PREDICTING HEART DISEASES WITH AN INTERACTIVE DASH BOARD AND INFORMATION GATHERING**

This project uses numerous data mining techniques using cog-nos analytics tool for visualizing and predicting heart disease. Building an important model for the medical system to forecast heart illness or cardiovascular disease requires use of Data Analytics .Medical professionals can assist patients by identifying cardiovascular illness before or after it manifests. Heart disease is one of the leading causes of death in the modern world. The important clinical challenge is the ability to forecast heart disease. But occasionally, a number of methods to forecast heart disease in data mining are found. Numerous methods for visualizing and predicting heart disease were discussed in this survey.

The awareness and knowledge of stroke warning symptoms are noticeably low among people. Heart disease is a general phrase that covers a wide range of heart related medical conditions. Predicting and diagnosing heart disease is the biggest challenge in the medical industry and it is based on factors like physical examination, symptoms and signs of the patient. Factors which influence heart diseases are cholesterol level of the body, smoking habit, and obesity, family history of diseases, blood pressure and working environment. Data mining is a complicated process that uses intricate algorithms to extract implicit, previously undiscovered possibly useful information known as knowledge from medical data. Data Mining accomplish the job, which centers on gathering a sizable amount of data, managing them, and creating reports on the data by taking out the knowledgeable information. Machine learning algorithms play a vital and accurate role in predicting heart disease. The advancement of technologies allows machine language to pair with big data tools to handle unstructured and exponentially growing data. In this project, K means clustering method is proposed in big data environment and the visualization is made with the tableau

dashboard.

Bo Jin, Chao Che, Zhen Liu and Shulong Zhang were colleagues suggested a neural network-based model for "Predicting the Risk of Heart Failure With EHR Sequential Data Modeling" in 2018. This study conducted an attempt to foretell congestive heart disease using electronic health record (EHR) data from real world datasets connected to the condition. To represent the diagnostic events and predicted coronary failure events using the fundamental tenets of an extended memory network model, they typically used one hot encryption and word vectors. By examining the outcomes, they often highlight how crucial it is to respect the sequential character of clinical records.

"Heart Disease Prediction via Evolutionary Rule Learning," by Aakash Chauhan and others (2018). In addition to assisting in directly extracting data from electronic records, this study eliminates the manual task. They used frequent pattern growth association mining on the patient dataset to produce strong association rules. For the prediction of cardiovascular disease, two types of experiments were employed. In the first form, a random forest model is created, while in the second experiment, a random forest model based on the suggested Random Search Algorithm is created. In comparison to the traditional random forest model, this methodology is effective and simpler. It produces 3.3% greater accuracy when compared to traditional random forests. The suggested learning approach can aid medical professionals in better heart failure identification.

Senthilkumar Mohan, Chandrasegar Thirumalai and others "Effective Heart Disease Prediction Using Hybrid Machine Learning Techniques" (2019) was an effective technique utilizing hybrid machine learning methodology. The hybrid method combines the random forest and linear approaches. The pre processed cardiovascular disease dataset was used to choose a subset of specific attributes. Hybrid approaches were used to diagnose cardiovascular illness after preprocessing.

The paper on "Prediction and Diagnosis of Heart Disease Patients Using Data Mining Technique" was written by Mamatha Alex P and Shaicy P Shaji in 2019. The

Artificial Neural Network, KNN, Random Forest, and Support Vector Machine techniques are used in this article.