**Hybrid Machine Learning Classification Technique for Improve Accuracy of Heart Disease**

The area of medical science has attracted great attention from researchers. Several causes for human early mortality have been identified by a decent number of investigators. The related literature has confirmed that diseases are caused by different reasons and one such cause is heart based sicknesses. Many researchers proposed idiosyncratic methods to preserve human life and help health care experts to recognize, prevent and manage heart disease. Some of the convenient methodologies facilitate the expert's decision but every successful scheme has its own restrictions. The proposed approach robustly analyze an act of Hidden Markov Model (HMM), Artificial Neural Network (ANN), Support Vector Machine (SVM), and Decision Tree J48 along with the two different feature selection methods such as Correlation Based Feature Selection (CFS) and Gain Ratio. The Gain Ratio accompanies the Ranker method over a different group of statistics. After analyzing the procedure the intended method smartly builds Naive Bayes processing that utilizes the operation of two most appropriate processes with suitable layered design. Initially, the intention is to select the most appropriate method and analyzing the act of available schemes executed with different features for examining the statistics.

**EXISTING SYSTEM:**

Some of the related works represent various convenient methods with the implication but none of the methods aid professionals under different characteristics. Therefore the design and implementation of these methods pave the way for further research. Additionally, the presented work indicates that the utilization of the data mining method works better than other approaches . With a discussion of research objectives, motivation, and key findings this chapter describes the contribution towards the direction.

**DISADVANTAGES OF EXISTING SYSTEM:**

* A huge number of methodologies of available algorithms are not appropriate to aid professionals under the different area, highly depends on the employed statistics, therefore, struggle to maintain recitation with the variation of data properties.
* The majority of the algorithms intended to accomplish only a specific task hence does not fit for the real-time scenario where the cost is one of the primary factors

**Algorithm**:knn, Decision Tree Regression.

**PROPOSED SYSTEM:**

the proposed work, there are four different classification algorithms were selected along with the two feature compressing methods as CFS with best-first search and Gain ratio with ranker mechanism. As described in the literature survey each algorithm is designed with an obtainable process in an optimized form, such a selected process may not be utilized to build a more competent method. The proposed method investigate and analyze four chosen method such as Hidden Markov Model (HMM), Artificial Neural Network (ANN), Support Vector Machine (SVM) and Decision Tree (J48) along with two other feature compressing methods. After analyzing these feature compressing methods, combine them with the linear models. And if any data is mismatched then reexamine with the other employed technique to improve the QoS.

**ADVANTAGES OF PROPOSED SYSTEM:**

* The comparative values show that the proposed method obtains higher accuracy when compared with other existing methods.
* The efficiency and suitability of the proposed approach are compared with other suggested methods.

**Algorithm**: Hidden Markov Model (HMM), Artificial Neural Network (ANN), Support Vector Machine (SVM), and Decision Tree J48 along.

**SYSTEM REQUIREMENTS:**

**HARDWARE REQUIREMENTS:**

System : Intel i5 6 core.

Hard Disk : 500 GB SSD.

Monitor : 15’’ LED

Input Devices : Keyboard, Mouse

Ram : 32 GB.

**SOFTWARE REQUIREMENTS:**

Operating system : Windows 10.

Coding Language : Python

Tool : PyCharm, Visual Studio Code

Database : SQLite

**REFERENCE:**

Ajay Maru; Ajay Kumar Sharma; Mayank Patel," **Hybrid Machine Learning Classification Technique for Improve Accuracy of Heart Disease**" 2021 6th International Conference on Inventive Computation Technologies (ICICT) INSPEC Accession Number: 20393604DOI: 10.1109/ICICT50816.2021.9358616.