# LITERATURE SURVEY


**TEAM NO** :10

**TEAM ID** :PNT2022TMID29954

**COLLEGE NAME** :ER.PERUMAL MANIMEKALAI COLLEGE OF ENGINEERING

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# PROBLEM STATEMENT

According to WHO ,heart disease is the leading cause of death globally representing 31% of all deaths occurred in low income countries and middle income countries. Therefore, there needs to be work done to prevent the risks of having A heart attack or stroke and to predict which patients are most likely to suffer from A heart disease in the future using the features given. The huge volume of data is used to make decision which is more accurate than intuition. .The dataset holds 209 records with 8 attributes such as age, chest pain type, blood pressure, blood glucose level, ECG in rest, heart rate and four types of chest pain. To predict the heart disease, k-means clustering algorithm is used along with data analytics and visualization tool. In the result section, the visualized data shows that the prediction is accurate. Heart disease is easier to treat when it is detected in the early stages. Machine learning techniques may aid a more efficient analysis in the prediction of the disease. Moreover, this prediction is one of the most central problems in medical, as it is one of the leading diseases related to unhealthy lifestyle. So, an early prediction of this disease will be useful for a cure. We experiment with the heart disease dataset to explore the machine learning algorithms and build an optimum model to predict the disease.

| S.No | TITLE | PROPOSED WORK | TECHNOLOG Y | ADVANTAGES/ DISADVANTAGES |
|---|---|---|---|---|
| 1 | Performance Enhancement of Predictive Analytics for Health Informatics Using Dimensionality Reduction Techniques and Fusion Frameworks | • Different fusion frameworks have been proposed to process heterogeneous and high dimensional health informatics data to develop an efficient and reliable disease prediction system.<br>• Multi source data fusion and Multimodal feature fusion techniques are used | • Machine Learning | ML Algorithms can be extracted meaningful terms from Big-Data, several problems in clinical practice. |
| 2 | A Data Analytics Suite for Exploratory Predictive, and Visual Analysis of Type 2 Diabetes. | • The analytics suite consists of exploratory, predictive, and visual analytics with capabilities including multi-tier classification of T2D patient profiles that associate them to specific conditions, T2D related complication risk prediction.<br>• The SVM model was validated via a 5-fold Cross-Validation | • Data analytics | T2D is safer and more beneficial for the patient as it will minimise side effects and offer faster, more effective treatment. |

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| 3 | Heart Disease Prediction using Machine Learning Techniques | • UCI Heart disease prediction consist of 14 different parameters related to Heart Disease.<br>• Machine Learning algorithms such as Random Forest, Support Vector Machine (SVM), Naive Bayes and Decision tree have been used for the development of model. | • Machine Learning | Result shows that compared to other ML techniques, Random Forest gives more accuracy in less time for the prediction. This model can be helpful to the medical practitioners at their clinic as decision support system. |
| 4 | A Deep Prediction of Heart Disease by Employing Analytics Method | Study intends to establish efficacious process to identify chronic kidney diseases[CKD] as early and accurately as possible. | • Big data for healthcare, | The ensemble method (voting classifier) is also used by altogether marching of all classifiers. |

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| 5 | Effective Heart Disease Prediction Using Hybrid Machine Learning Techniques | The hybrid approach is combination of random forest and linear method. The dataset and subsets of attributes were collected for prediction. | • Machine Learning | The accuracy of the data framing in this technology will be validated using classifiers. |
| 6 | Prediction of Heart Disease Using Machine Learning Algorithms | Machine Learning algorithms such as Random Forest, Support Vector Machine (SVM), Naive Bayes and Decision tree have been used for the development of model. | • Machine Learning<br>• WEKA Tools<br>• Data mining | The main Methodology used for prediction is Decision Trees like CART, C4.5, CHAID, J48, ID3 Algorithms, and Naïve-Bayes Techniques.. |

# THANK YOU