**A Project Report On**

**HEART DISEASE PREDICTION USING MACHINE LEARNING**

Submitted to

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY**

**Kukatpally, Hyderabad-500085, Telangana, India**

In partial fulfilment of the requirement for the award of degree of

**BACHELOR OF TECHNOLOGY**

In

**Information Technology**

By

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**CERTIFICATE**

This is to certify that this project work report entitled “**HEART DISEASE PREDICTION USING MACHINE LEARNING“** which is being submitted by **HIMA BINDU[17E31A1211],YASMEEN BEGUM[17E31A1233],** in partial fulfilment for the award of the Degree of Bachelor Of Technology in Information Technology , affiliated of Jawaharlal Nehru Technological University, Hyderabad and is a record of the bonafied work carried out by them under our guidance during 2020-2021.

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**DECLARATION**

We hereby declare that the project entitled “**HEART DISEASE PREDICTION USING MACHINE LEARNING”** submitted to partial fulfilment of the requirements for award of the degree of **Bachelor of Technology** at **Mahaveer Institute of Science and Technology,** affiliated to **Jawaharlal** **Nehru Technology University, Hyderabad** in authentic work and has not been submitted to any university institute for award of any degree.

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**ABSTRACT**

The major killer cause of human death is Heart Disease (HD). Many people die due to this disease. Lots of researchers have been discovering new technologies to prognosticate the disease early before it’s too late for helping healthcare as well as people. These processes are still under research phase. Machine Learning (ML) is faster-emerging technology of Artificial Intelligence (AI) that contributes various algorithms for HD. Based on the proposed problem, ML provides different classification algorithms to divine the probability of patient having HD. For predicting HD, a lot of research scholars contributes their effort in this work using various techniques and algorithms such as Decision Tree (DT), Naïve Bayes (NB), Support Vector Machine (SVM), KNN (KNearest Neighbor),Random Forest etc. In order to give some effort on this work, We are using the UCI repository HD dataset to train a model . The dataset contains 303 instances with 14 attributes that help to train a prediction model that will be for prediction. The main aim of this project is to build an efficient prediction model and deploy for prediction of disease. An HDP Model is built by using NB algorithm that provides 88.163% accuracy among others. Each phase is efficiently done. The project is successfully created with help of requirement analysis and project plan, system design, database design, testing plan, identifying features and functionalities, and system validation and deployment. The limitation of this project is to have only predicted the presence of heart disease but not identify which type of HD does have at patient. In future work, we can enhance the project by appending more detail prediction of HD at patient and incorporate with smart wear devices that integrate to Hospital Emergency System.

Keywords: Machine Learning (ML), Decision Tree (DT), Naïve Bayes (NB), K-Nearest Neighbour (KNN), Random Forest (RF),Support Vector Machine (SVM).

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