

Comparative Analysis of Classification Algorithm for Heart Disease Prediction

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Abstract: One of the most serious issues we face today because of lifestyle and health decisions is heart disease. The project's primary goal is to anticipate the likelihood of heart disease and the main risk factors for it. We made an effort to pinpoint the risk factors that heart diseases are caused by the most. With the help of machine learning techniques and five different classification algorithms—Logistic Regression, Random Forest, SVM, K-NN, and Naive Bayes. We analyzed the data sets to better understand our datasets and create classification models. We compared all the models and chose the best one. We then developed performance evaluation metrics to generate various parameters to evaluate the classifiers, using the boosting technique to further improve accuracy. On the Cleveland dataset, we noticed that SVM had higher accuracy, but after combining all the datasets, KNN and Random Forest showed similarly effective results. Considering the processing time, we came to the conclusion that KNN was a better option for our project. As a result, the suggested system can tell those who are healthy from those who have cardiac disease.

Keywords: Heart Diseases, coronary heart ailment, design section, KNN, choice tree, Naïve Bayes, Logistic Regression.

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