

Title : Early Prediction of Cardiovascular Diseases Using Feature Selection and Machine Learning Techniques(Conference Paper)

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Abstract

cardiovascular disease is one of the most important diseases that affects the heart and blood vessels. The loss of lives is mostly linked to a lack of early disease detection, and a preemptive prediction of cardiovascular disease risk will greatly alleviate the situation. Due to the increasing amount of data growth in the health care industry, therefor Machine Learning techniques predict the disease depends on the severity of the patient's side effect. This research work proposes a model to perform early prediction of cardiovascular disease by using different machine learning algorithms, which are used for different prediction purposes. For feature selection purposes, Random Forest algorithm is used to select suitable attributes for the prediction process. The proposed model is assessed based on evaluation metrics; accuracy, precision, recall (sensitivity), f1- score, and specificity. In this exploration of predicting cardiovascular disease, the XGBoost machine learning classifier accomplished a higher rate of accuracy 75.10%. Also, this model provides a higher rate for other evaluation metrics for all the evaluation metrics 76.64%, 69.88%, 79.32%, 78.16%, and 72.84% for precision, sensitivity, specificity, and f1-score, respectively in the case of early cardiovascular diseases prediction. © 2021 IEEE.

Author keywords

Accuracy Cardiovascular disease Dataset Splitting Machine Learning (ML) Algorithms Random Forest XGBoost Classifier

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