

A Comparative Study of Classification and Prediction of Cardio-Vascular Diseases (CVD) using Machine Learning and Deep Learning Techniques

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ABSTRACT

Cardio-Vascular Diseases (CVD) are found to be rampant in the populace leading to fatal death. The statistics of a recent survey reports that the mortality rate is expanding due to obesity, cholesterol, high blood pressure and usage of tobacco among the people. The severity of the disease is piling up due to the above factors. Studying about the variations of these factors and their impact on CVD is the demand of the hour. This necessitates the usage of modern techniques to identify the disease at its outset and to aid a markdown in the mortality rate. Artificial Intelligence and Data Mining domains have a research scope with their enormous techniques that would assist in the prediction of the CVD priory and identify their behavioral patterns in the large volume of data. The results of these predictions will help the clinicians in decision making and early diagnosis, which would reduce the risk of patients becoming fatal. This paper compares and reports the various Classification, Data Mining, Machine Learning, Deep Learning models that are used for predicting the cardio-vascular diseases. The survey is organized as threefold: Classification and Data Mining Techniques for CVD, Machine Learning Models for CVD and Deep Learning Models for CVD prediction. The performance metrics used for reporting the accuracy, the dataset used for prediction and classification, and the tools used for each category of these techniques are also compiled and reported in this survey.

