Abstract

Abstract− Coronary heart disease (CHD) is one of the deadliest diseases in the world, especially in Indonesia. This disease is caused by the accumulation of fat in blood vessels and can cause heart attacks that can endanger a person's health and safety. There are several methods for detecting CAD, such as using Electrocardiogram (ECG) signals and Photophlethysmograph (PPG) signals. However, studies that have tested machine learning classification methods to detect CAD using PPG signals are rarely found compared to detection using ECG. This study uses PPG signals taken from smartphone cameras to detect CHD, so that CHD detection is easier and affordable. To be able to diagnose CHD, machine learning assistance is needed to determine whether CHD is positive or negative. This study proposes a classification algorithm study to detect CAD. There are 3 classification methods used in this study. The three methods are KNN, SVM, and decision tree. The final results obtained in this study resulted in the best classification for KNN 81%, SVM 90%, and Decision Tree 90%. Each classification used has been carried out before and after tuning

Keywords: PPG; CAD; KNN; SVM; Decision Tree