

ABSTRACT

Atrial Fibrillation (AF) is a cardiac arrhythmia disorder that can result in death in patients. Photoplethysmography (PPG) is an alternative technique to get heart rate information by pulse oximetry. Several studies have examined the feasibility of PPG signals to detect and analyze the presence of AF disease. These studies generally still have accuracy, sensitivity and low specificity and have a high error bias. There are several reasons that affect these results such as the selection of features and classification algorithm that is not right. To solve the problems above, this final project research conducted a study of PPG feature selection and classification algorithm so that high accuracy, sensitivity and specificity were obtained. The method used in the selection of features is to take data in several places in the body of the patient, namely the arms and fingers. As for the classification algorithm, this study uses the Naïve Bayes Classifier method. This research has conducted a comprehensive experiment to get optimal results. Analysis has also been carried out based on established metrics. The experimental results show that the accuracy obtained is 91%, 95% sensitivity and 88% specificity on the fingers. Whereas the arms have an accuracy rate of 39%, a sensitivity of 58% and a specificity of 16%.

Keywords: *atrial fibrillation, photoplethysmograph, sinyal*

