ABSTRACT

Atrial Fibrillation (AF) categorized as one kind of arrhythmia that mostly found on a daily basis. It is indicated by irregular heartbeat in the heart's electrical system from the atrium into the ventricle. A person who has never had a history of cardiovascular disease even gets possibility suffering from AF. It can increase risks of stroke, heart failure, and death. For someone who experiences the symptoms of AF must do check-up with electrocardiogram machine.

An Electrocardiogram is a record or display of a person's heartbeat in the form of waves. But, there is lack of ability in analyzing and it's still difficult to diagnose the readings of ECG. Because of that, classification of ECG signals is needed to detect someone, specifically for the person suffering from AF or not. There are three stages in this research; they are pre-processing, feature extraction, and K-NN classification. Feature extraction applied by comparing the RR interval of AF's signal and the normal one.

The best performance result of AF detection based on the accuracy of the overall scheme, the best k is k = 1 with an average accuracy at 91.75% and the highest accuracy level at 95.45% with division data at 60:40 percent.

***Keywords**: ECG, Atrial Fibrillation, RR interval, classification, k-Nearest Neighbor*