ABSTRACT

Heart has a very important role in the systematic organs of the body so it is required to always work well. In the medical world, there is an instrument which can detect a heart condition, called electrocardiograph (ECG) that produces waves as a representation of the changes in the electricity of the heart. ECG is a device capable of recording electric signals on the surface of the skin coming from the heart. Moreover, ECG ilustrates a person's heart condition so can provide consideration to the doctors to analyze disease quickly. As the aim of this work is to analyze the data of the heart condistions using transformation wavelet method. This aktivity research is designed to analyze and diagnose eletrocardiogram signals and then used to find out whether the heart condition is in good condition or not.

Method used on this work is the transformation wavelet and k-nearest neighbors. ECG signals are extracted by using discrete transformation wavelet while K-nearest Neighbors serves to classify the features of those signals.

The result of this research is analytical and diagnostics data which is have reach the level of accuracy of 98% and may be used in the medical world.

Keywords: Discrete Wavelet Transformation, Electrocardiogram, K-Nearest Neighbors