

ABSTRACT

Electrocardiogram (ECG) in medical word is a signal which represent activity records of human heart, in other word this ECG is wellknown as heart signal. ECG could help medical expert in diagnostic heart disease in human. But unfortunately not all doctors can read ECG, its because reading an ECG is not as easy as it says in theories when they learnt. As a matter of fact its need practicall experience with many hours. So, people who can read ECG are restricted to cardiologists.

In this Final Task will be made a software that could classify 4 class of heart disease into its classes. For that purpose, Artificial Neuron Network Backpropagation will be use as classifier and principal component analysis will be use as feature extraction methods.

The accuracy result is 51.75% for PCA with 350.000 epoch, 2 layer. The best result got when increase epoch value up to 3.5 million epoch, 71%. Apparently the results of principal component analysis as a feature ekstraction for a signal with smaller matrice (in this case is a matrice 2 x 1251), is not good and effective. This results affects the artificial neuron network in classifying the ECG signal into it's classes, therefore the accuracy artificial neuron network get is below 80%, different from previous taget which is hope that artificial neuron network could classify the signal more than 80% accuracy.