ABSTRACT

Classification is one part of computation system which predict each record of data to particular class, because of that, classification is of supervised learning. In medically, classification is most important things to do which in to keep safety data, clustering and also detection of ECG's signal. With the result that, can be easy understand in human language for the doctors and the cardiologist to analysis and diagnosis.

Neural Network is one part of Artificial Intelligence area which have strong ability in learning, there are two learning Supervised and Unsupervised learning. It has high accuration to predict based from learning. But recently Neural Network just can give implicit knowledge, because the knowledge stored on the weight of the link between node.

The object of this research is to classification pattern from ECG's signal of the patient using the " Back Propagation of Artificial Neural Network " from given data set, and then can be easy understand in human language. The ECG's signal are extracted using *Linear Predictive Coding* and *Prony* in order to obtain unique features from each pattern of ECG's signal.

General abstraction of this Final Project research is measuring value of accurated and sensitivity data from system to get the best of maximum result and also minimum fault. The result of this final project is indicated that extraction using Prony give an excellent result with has an accuracy rate around 88.89 % and sensitivity rate around 100 %. The other way, LPC given an accuracy rate around 82.54 % and sensitivity rate around 100 %.