ABSTRACT

Cardiac arrhythmia is a heart disease in which the heart does not work normally, such as a heartbeat that is too fast or the heartbeat is too slow. In this thesis, the authors will implement a modified neural network method using conjugate gradient beale-powell restarts to classify ECG (*ELECTROCARDIOGRAM*) signals before classifying any process where the signal will be extracted features first using the RR peak interval feature and then analyze the accuracy of the modified backpropagation method using bakpropagation conjugate gradient powell beale. a common feature of people with symptoms of arrhythmia. In the test data is performed based on the distance between the peaks seen in normal heart signals and heart disease signals. Data sets were prepared based on normal heart signals and heart disease signals. The data sets are used for training on Backpropagation using the backpropagation conjugate gradient powell beale algorithm. The highest result obtained from the classification using the backpropagation conjugate gradient powell beale method is 87.5%

Keywords: *Arrythmia*, *Artificial Neuron Network*, ECG, Feature Extraction, RR *peak interval feature*, *backpropagation conjugate gradient powell beale.*