Abstract
Atrial fibrillation is a condition where the heart rhythm becomes irregular and chaotic due to problems with the heart's electrical system. This study builds a system that can classify AF by using three Neural Network methods, namely Multilayer Perception-Backpropagation (MLP-BP), Learning Vector Quantization (LVQ), and Probabilistic Neural Network (PNN). This topic was raised to get the best algorithm of the three Neural Network algorithms for classifying AF. In addition, this study will test and analyze the performance of the three algorithms that are determined by the value of accuracy, sensitivity and specificity. The best results are shown in MLP-BP with learning rate 20, number of epoch 1800 and number of neurons in hidden layer 20. The performance obtained is 92% accuracy, sensitivity 100% and specificity 83.33%.

Keywords: *atrial fibrillation, classification, learning vector quantization, multilayer perception-backpropagation, neural network, probabilistic neural network.*