ABSTRACT

Cholesterol detection generally done by blood test in laboratory or hospital. In order to get the accuracy of detection, patient must process fasting the night before. This procedure takes a lot of patients time. So that, in this final project, the cholestrol will be detected using patient's iris. Characteristics patient with more cholestrol have white circle or gray in his iris.

Iris patients will be captured by digital camera then process image processing that is resize (decreased scale of image dimension), image conversion from RGB to grayscale then global thresholding process then histogram characteristic extraction process in order to get an bit output that will be used as input to JST unit. In JST unit there is 2 processing will be done that is training and test. Training used to get the best weight that will be used in test.

Best weighted got from MSE value that most near to minimum error, with parameters (learning rate,momentum and hidden layer) changed. The more amount neuron then data processing time getting lower, and the more amount of black pixel in characteristic extraction output then the probability of cholestrol detected is getting bigger.

Keyword: *Cholestrol,Resize,Grayscale,Histogram,*JST.