ABSTRACT

Human body medical examination usually done by blood pressure test,respiratory test by stethoscop or by other test like clinical check-up. Those medical check-ups need a long time to get the results. Iridology is a new science that can be used to reveal human inner organ condition. Iridology is medical science that can be used to know human inner organ condition based on the analysis of iris composition. This can be applied because all the neurons from the brain are connected to eye. Therefore, when inner organ sends signals to the brain to be recorded, those signal will be sent and recorded in iris which shows the organ condition.

This final project will make a system that can detect kidney and lung function weakening by observing human iris. In preprocessing step, there will be image processing like grayscale, then there will be feature extraction process by using principal component anlysis and matching process by using backpropagation method which is one of the artificial intelligence system.

In artificial neural network unit there will be two processes which is training and testing. Training is done to get the best weights to be used in testing process. The best weights obtained by nearest MSE (Mean Square Error) from minimun error values by changing the parameters (learning rate,momentum, and hidden layer).

Keyword : iridology, image processing, principal component analysis, backpropagation neural network.