

Abstract

Iridology is a detection method of organ weakness through the features in the iris. It is because the iris is a representation of the detailed view of the whole body condition. The condition of the body notified to the brain then transmitted to the eye so that the condition of the body can be detected through the iris. Organ seen in this final project is to detect gastric dyspepsia.

This Final Project implements Linear Discriminant Analysis (LDA) and Cascade Correlation Neural Network to detect dyspepsia. Detection process consists of three stages: (1) preprocessing the image of eye, (2) feature extraction using Linear Discriminant Analysis, (3) classification using Cascade Correlation Neural Network.

LDA is a feature extraction method that has an important role to get rid of useless data, Cascade Correlation is a supervised and dynamic neural network learning methods that starting from a simple architecture which trained and added one hidden neuron each iterations until it reaches the optimal architecture.

The accurate result for dyspepsia detection by iris using LDA feature extraction and Cascade Correlation Neural Network obtained up to 100% for training and testing data when it has right parameter.

Key words: *dyspepsia, iridology, Linear Discriminant Analysis, Cascade Correlation Neural Network*