Abstract

The increasing number of the students from year to year in IT Telkom also caused increasing final project books made. With the increasing number of the fa]inal project books, a new problem has arised, namely the problem of documentation. System documentation done in the IT Telkom's library still done manually, by typping the exsited data needed from the final project books. It is encouraged that: a system that can facilitate the documentation. With this system, the documentation is expected proficienly level to the computer witout needed to type it manually.

To assist library staff in documenting the final project books, they invented a system that can input the tittle along with the names and NIM of the students without entering it manually. The system works by utilizing digital image processing to recognize character patterns. Acquired images are processed using software Matlab. The data further be process of featured extraction called MDF. Then be process of patern recognition features with artificial neural network method.

Such system required an intellegent system that can learn to recognize patterns. Artificial Neural Networks (ANN) is a single branch of artificial intellegent (AI) designed to mimic the working of the human brain in solving a problem through the learning processes.

In this final project, it conducted several scenarios to determine the parameters that affect the accuracy of the system. The parameters analyzed are the number of neurons, hidden layes, and desired MSE. The experimental results show that the *Backpropagation* algorithm provides not good enough accuracy in term of pattern recognition with appropriate setting of the parameter and feature extraction.

Keywords : *digital image, pattern recognition, feature extraction, MDF, back propagation, neuron, hidden layer, MSE*