

Abstract

Important scripts in history, corporate confidential documents, scientific paper and other similar things were easily deteriorated. This fact encouraged individuals and institutions to retype the scripts by using a computer, but this would not be efficient if they were typed one by one. Therefore a technology of hand writing recognition is absolutely needed. One of the algorithms which could learn and recognize hand writing well was an artificial neural network (ANN). One of the ANN models which could store some information about data patterns in network structure was a recurrent neural network (RNN).

In this final project a system which can recognize hand writing was developed using RNN. The more optimum RNN structure is developed, the better performance of the RNN will be. To find an optimum RNN structure, a genetic algorithm was used.

The result of searching optimum structure in RNN using a genetic algorithm, showed that RNN had the ability to recognize hand writing of a set of test data by 67,69 % accuracy.

Keywords: *Handwriting Character Recognition, Artificial Neural Network, Recurrent Neural Network, Genetic Algorithm.*