ABSTRACT

Time series forecasting is used to analyze a single variabel data that arranged in a serial time. It is needed, especially if what we have is only a group of historical data, without any understanding of the influence factor. Much effort have been done to obtain the most accurate result. One of the effort is using artificial neural network. Elman recurrent neural network are useful in situations when there is a temporal relationship in data. Recurrent neural network is modification of the famous feed forward neural network, and proper to be used in a time series forecasting.

This final project analyze time series forecasting problem in case composite stock price indeks, using Elman recurrent neural network with backpropagation through time algorithm which is modification of backpropagation algorithm so that can be used in recurrent network.

By using historical data and without having any special knowledge about stock exchange, we have trained and tested data so that gain 2 series as apropriate number of series and 2-30-1 as the best architecture of the network.

Keywords : Forecasting, Elman Recurrent Neural Network, Time series, Backpropagation through time