Abstract

Crude oil is a very important commodity. Because crude oil is the main energy sources are desperately needed in the whole world. So that the world crude oil price changes will greatly affect the economic situation of a country terserbut. To predict the rate of crude oil, the crude rate of historical data which is the time series data generated will be studied until a specific forecasting program.

At this final project developed a program to estimate the crude rate based on historical data rates of crude oil by using Jordan Recurrent Neural Network Algorithm. The more optimal Jordan Recurrent Neural Network is constructed, the higher the resulting accuracy. By using the Backpropagation Through Time can be obtained RNN weights are optimal.

The data used are crude rates historical data from the month of January 1986 until December 2011. Based on data from the Jordan Recurrent Neural Network estimate crude rates next month based on the input rate of crude oil a few months earlier. Of training and validation process, obtained the best average accuracy of 95.55% for training data and validation. Of the testing process, obtained the best average accuracy of 91.87% for data testing.

***Keywords**: Jordan Recurrent Neural Network, crude rate, time series data, Backpropagation Through Time*