Abstract

Gold is one of high value precious metals. Many people invest their money in goldbecause gold investments have resistance to inflation. Data exchange g old selling is a type of time series data. To predict the selling rates of gold, the gold selling rateshistorical data is the data time series will be studied to produce a particularforecasting system.

In this final project developed a system to estimate the selling rates of gold based onhistorical data selling rates of gold using a Recurrent Neural Network (RNN). The more optimal RNN built the higher the accuracy is generated. By using Differential Evolution can be obtained by weighting the optimal RNN.

The data used historical data exchange is selling gold from the month of January 1968 to March 2009. Based on these data RNN estimated selling rates next monthbased on input selling rates a few months earlier. From the testing process, obtainedthe best average accuracy of 99.67% for testing data. And highest accuracy of 99.99% to predict a month ahead.

Keyword : *Recurrent Neural Network, Differential Evolution, gold exchange rate, time series*