

Abstract

Silver is one kind of metal that useful both for industry and households. The price of silver at a certain condition has fluctuative increased and decreased level. But in other condition, silver price could be in state that relatively fixed. This silver price data is called time series data. To predict silver price, silver price historical data will be studied until produced certain patterns.

In this final task, a prediction system has been developed based on silver price historical data by using Elman Recurrent Neural Network. By using Tabu Search could be obtained optimal structure and weight of Elman RNN. The more optimal Elman RNN is constructed, the higher accuracy of prediction system is generated.

This prediction system use historical data of silver price from January 2, 2008 until May 14, 2010. Elman RNN estimate the next day silver price based on input data of previous day silver prices. From testing process, obtained the best average accuracy of 97.1093% for testing data.

Keyword : Silver price, time series, Elman Recurrent Neural Network (Elman RNN), Tabu Search.