

Abstract

Timeseries data is the data that consist of one object which collected from sequential time to give the description of the development of situation in times. The fluctuative data has some patterns from one time to another. Timeseries data is very useful for making some decisions to estimating the future condition. That because it is believed that the fluctuative pattern in the past will be repeated in present, so that we can learn the data pattern and predict the data. In this final assignment, for predicting gold price, data used include gold price, forex price, and world oil price.

Fuzzy system has a strength to modeling the qualitative aspect from human knowledge and making a decision (reasoning) such as human that apply base data rules. Furthermore, fuzzy system can be used to find the continuous pattern so that can be used in prediction and forecasting cases. With preprocessing data and Particle Swarm Optimization method, the average of MAPE (Mean Absolute Percentage Error) from testing data can reach 2,8%.

Keyword: *data time series, pola, system fuzzy, particle swarm optimization, gold price, forex price, world oil price.*