Abstract

The operations of the prediction of stock price are complex and risky due to fluctuation in the stock market because of the vagueness, incompleteness, and uncertainty of the information used. However, it is therefore as a matter of necessity to seek to foresee stock prices because traders need to know when to invest in order to get the maximum return of the investment. This paper proposes a Sugeno-type fuzzy inference system for stock price prediction using technical indicators as its input values. Knowledge Base, Fuzzification, Inference Engine and Defuzzification are the essential components of our model. We explore Sugeno-type fuzzy inference engine to optimize the estimated result. We evaluate the degree of participation of each input parameter with Trapezoidal membership function. Center of Gravity technique is employed for defuzzification. We employ object oriented design tool to model our database. MATLAB and fuzzy relational database are used in the implementation of our study. The development of this system is based on the selection of stock data history which are studied and used for training the system. This system provides vital support to stock traders, researchers and other financial experts in making decisions as regards stock trading.
Sugeno-Type Fuzzy Inference Model for Stock Price Prediction

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Index Terms
Computer Science Fuzzy Systems

Keywords
Fuzzy Logic Stock Price Technical indicators Trapezoidal membership function
Object Oriented Tool.