Abstract

In a real-time application scenario, the proposed Probabilistic Fuzzy Logic (PFL) approach can be implemented in various applications such as health care, stock trading, click stream analysis, retail and supply chain management. This work analyses stock trading due to its high non-linear, uncertain and dynamic data over time. Therefore, this paper presents an innovative probabilistic approach for stock price prediction that minimizes the investors risk while investing money in the stock market. We implemented this approach in a publisher/subscriber middleware system, where the crucial Complex Event Processing (CEP) technology processes the large number of incoming stock quotes with the deployment of probabilistic framework. This methodology identifies the event patterns subscribed by the stock traders/brokers over the incoming event stock quotes of market data. This approach triggers an appropriate output event to notify the opportunities to buy and to sell share in real-time based on event patterns of price movements. Experimental evaluation is carried out based on the published data to demonstrate the effectiveness of the proposed approach.

Index Terms

Computer Science

Fuzzy Systems
Keywords
Event Processing  Probabilistic Fuzzy Logic  Stock Trading  Data Uncertainty
Complex Event Processing