

A Case-Based Reasoning-Decision Tree Hybrid System for Stock Selection

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Abstract : Stock selection is an important decision-making problem. Many machine learning and data mining technologies are employed to build automatic stock-selection system. A profitable stock-selection system should consider the stock's investment value and the market timing. In this paper, we present a hybrid system including both engage for stock selection. This system uses a case-based reasoning (CBR) model to execute the stock classification, uses a decision-tree model to help with market timing and stock selection. The experiments show that the performance of this hybrid system is better than that of other techniques regarding to the classification accuracy, the average return and the Sharpe ratio.

Keywords : case-based reasoning, decision tree, stock selection, machine learning

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