Apply genetic programming to build investment strategy model

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Abstract

In recent years, data mining technology has been extensively applied to researches for investment related issues. And application methods include decision tree and artificial neural network, etc. Nevertheless, instead of relying on methods in the past, this research adopts genetic programming planning to conduct domestic stock market investment strategy researches. This thesis takes three approaches in strategic sense respectively: Call, put and hold. First of all, it collects daily information and relevant factors which could influence the stock price one day ahead of the actual trading for China Steel stocks. These factors include aspects in the stock’s fundamental, share volume, technical performance in addition to Dow Jones average plus processing these information and subsequent normalization. Lastly, genetic programming planning is applied to construct investment model accordingly, in addition to conducting comparison analyses regarding the investment strategy classification capabilities for the decision tree modelling. From the end results of validity in classification accuracy for these two models, the findings of this research indicate that genetic programming planning is the better and preferred model in the sense of classification capability when comparing to that of decision tree model.

Keywords and phrases: Data mining, investment strategy, genetic programming, decision tree.

1. Preface

Investment strategy is usually the topic that catches the attention of most investors. When general investors perform stock trading, they

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