Abstract

Recent studies have shown that in the context of financial markets, technical analysis is a very useful tool for predicting trends. Moving Average rules are usually used to make “buy” or “sell”
decisions on a daily basis. Due their ability to cover large search spaces with relatively low computational effort, Genetic Algorithms (GA) could be effective in optimization of technical trading systems. This paper studies the problem: how can GA be used to improve the performance of a particular trading rule by optimizing its parameters, and how changes in the design of the GA itself can affect the solution quality obtained in context of technical trading system. In our study, we have concentrated on exploiting the power of genetic algorithms to adjust technical trading rules parameters in background of financial markets. The results of experiments based on real time-series data demonstrate that the optimized rule obtained using the GA can increase the profit generated significantly as compare to traditional moving average lengths trading rules taken from financial literature.

References

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Index Terms

Computer Science

Artificial Intelligence
Keywords

- Genetic Algorithms (GA's)
- Population size
- Trading system
- Technical rule