

PROCEEDINGS

An Investigation of Signal Filtering Methods in Trend Following Strategy Using LSTM

Yi-Chun Cheng¹, Mu-En Wu¹, Ju-Fang Yen², Sheng-Chi Luo¹ and Jimmy Ming-Tai Wu^{1,*}

¹National Taipei University of Technology (NTUT), Taipei, 10608, Taiwan

²National Taipei University (NTPU), Taipei, 10491, Taiwan

*Corresponding Author: Jimmy Ming-Tai Wu. Email: wmt@wmt35.idv.tw

ABSTRACT

Quantitative trading is a strategy that relies on mathematical and statistical models to identify market trading opportunities. Trading strategies can be categorized into trend following and contrarian trading. Way of the Turtle is one of the famous trend following strategies. This study proposes a customized trend following trading mechanism based on Way of the Turtle. The focus of the strategy is to capture major trends over a few significant market moves, so it can be seen that the importance of the entry signals to the trend-following strategy. Therefore, this study applies Long Short-Term Memory (LSTM) to analyze input features and filter entry signals, conducting experiments with four different index futures as the primary targets, aims to demonstrate the effectiveness and stability of the customized trading mechanism and model. Comparing the LSTM model with five alternative algorithms, the research shows that the LSTM model outperforms others in terms of accuracy, precision, recall, and F1-score evaluation metrics. The results clearly indicate that utilizing LSTM for entry signal filtering in trend following strategies is an effective approach. This not only reduces the number of trading days but also enhances investment returns and win rates.

KEYWORDS

Quantitative trading; LSTM; trend following

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