عنوان مقاله:

A new hybrid method of dynamic mode decomposition and long short-term memory for financial market forecasting

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خلاصه مقاله:

Forecasting price trends in financial markets is of particular importance for traders because price trends are inherently dynamic and forecasting these trends is complicated. In this study, we present a new hybrid method based on combination of the dynamic mode decomposition method and long short-term memory method for forecasting financial markets. This new method is in this way that we first extract the dominant and coherent data using the dynamic mode decomposition method and then predict financial market trends with the help of these data and the long short-term memory method. To demonstrate the efficacy of this method, we present three practical examples: closing price of US Dollar to Iranian Rial, closing prices of zob roy Isfahan stock, and also closing prices of siman shargh stock. These examples exhibit bullish, bearish, and neutral behaviors, respectively. It seems that the proposed new method works better in predicting the financial market than the existing long-short-term memory method.

کلمات کلیدی:

Dynamic mode decomposition, Long short-term memory, Financial market forecasting

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