A hybrid approach for forecasting stock market indices

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Forecasting index prices is complex due to the non-linear nature of time series data generated from the stock market. While machine learning and deep learning have surfaced as capable tools for identifying patterns and generating predictions based on historical data, updating these models in real-time is crucial for accurate forecasting. We propose to test a novel hybrid bidirectional LSTM (H.BLSTM) model that combines incremental learning and deep learning techniques for real-time index price prediction along with addressing these scalability and memory constraints. Through considerable experimentation, the method's efficiency in producing more accurate price projections for major stock indexes worldwide, is demonstrated by its implementation into a real-time trading system. The tested model achieved an average mean absolute percentage error of 0.001 across nine stock indices, significantly outperforming traditional models.

Reference :

1. An efficient hybrid approach for forecasting real-time stock market indices

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