

Prediksi *Return* Saham Pada Indeks LQ45 Dengan *Long Short-Term Memory* (LSTM) dan Penerapannya Untuk Seleksi Portofolio

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Abstract

Stock is an investment instrument that offers high returns yet high risk because the future price is unknown. Many methods have been developed to predict stock prices and return, one of the promising ones is Long Short-Term Memory (LSTM). In this paper, LSTM method will be applied to predict stock returns that are incorporated in the LQ45 index. The results of stock return predictions will be taken into consideration for stock selection. Stocks with a predicted return higher than the threshold will be selected into the portfolio. From the selected stocks, the portfolio is constructed using the Equal Weight (EW) and Mean-Variance (MV) methods. Portfolios with and without selection will be compared to get the highest mean return and Sharpe ratio. The experimental results show that 7 stock's portfolio for threshold 0.005 is the best portfolio with mean return is 0.0079 and Sharpe ratio is 0.3295.

Keywords: stock return prediction, portfolio, LSTM
