

ANALYSIS AND PREDICTION OF INDONESIA STOCK EXCHANGE (IDX) STOCK PRICES USING THE LONG SHORT TERM MEMORY (LSTM) ALGORITHM

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ABSTRACT

Stock investment is now a popular choice for many individuals and business entities. To optimize investment profits, a deep understanding of price movements, timing, and accurate predictions in transactions is required. The Long Short-Term Memory (LSTM) algorithm is a type of artificial neural network that is suitable for time series data such as stock prices so that it can recognize complex temporal patterns in financial data. This algorithm has the potential to help investors and financial analysts predict BBRI stock prices more accurately. The purpose of this study is to predict the closing price of BBRI shares using the LSTM algorithm. This system can also perform technical analysis with various indicators to understand the characteristics of the financial market. The research data includes BBRI stock prices from January 2006 to the present, with the closing price as the main variable. The results of the study showed good model performance with a Mean Squared Error (MSE) value of 413.63, Mean Absolute Error (MAE) of 18.20, and Root Mean Squared Error (RMSE) of 20.33 on the training data. This reflects the level of accuracy of the model to the training data. Despite the slight increase in validation data, these values remain within acceptable levels, demonstrating the model's ability to recognize previously unseen data patterns.

Keywords: Stocks, Prediction, LS9TM, Technical Analysis, BBRI

