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StockSight: Insightful Predictions for Strategic Investments

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Abstract: *Analysts have been examining different strategies to viably anticipate stock advertise costs. Valuable expectation frameworks give dealers with way better experiences into future patterns, profiting speculators by analyzing future showcase conditions. This project's primary objective is to realize superior exactness in forecasts compared to past models utilizing distinctive machine learning calculations. In this work, we employ three machine learning algorithms: Random Forest, LSTM, and Decision Tree Regressor. We also use four evaluation metrics: R Squared Error, MAE, MSE, and RMSE, to predict the stock prices of JPX Tokyo Stock Exchange and ITC Limited, and to compare their accuracy. The JPX Tokyo Stock Exchange and ITC Limited stock price data were downloaded from the Kaggle website. The dataset attributes include Date, Open, High, Low, Close, Adj Close, and Volume. The full source code of the project was written in Python. It is hypothesized that the LSTM model provides more accurate predictions than the Random Forest and Decision Tree Regressor for Tokyo stock data, while Random Forest offers more accurate predictions than LSTM and Decision Tree Regressor for ITC Limited stock data.*

Keywords: Machine Learning, Python, Random Forest Regressor, LSTM, Decision Tree Regressor, R Squared Error, RMSE, MSE, MAE