






Gokaraju Rangaraju Institute of Engineering and Technology
(Autonomous)
Department of Data Science

III-year B. Tech II Sem Mini Project Work

Abstract Form

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Domain	Stock Market		
Project Title	Stocks Unveiled: LSTM vs. Classical Models in Price Prediction		
Batch Number:	B6		
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ABSTRACT

The dynamic nature of stock markets renders price prediction a multifaceted yet inevitable part of financial analysis. This project, "Stocks Unveiled: LSTM vs. Classical Models in Price Prediction," aims at assessing and comparing the performance of conventional machine learning models and deep learning models, especially LSTM, in predicting stock prices. The models employed are Linear Regression, Random Forest, Support Vector Machines (SVM), RNN-LSTM, CNN-LSTM, and two hybrid methods—one is a mix of CNN-LSTM with RNN-LSTM, and another is a fusion of the highest-performing conventional model with the hybrid deep learning framework. Preprocessed historical stock market data from Alpha Vantage was used with Python, Pandas, and Scikit-learn libraries to study and analyze. The performance measures employed were Accuracy, RMSE, and MSE. Though Linear Regression produced robust numerical performance, the overall hybrid model exceeded others in the case of trend prediction and total performance. The project offers a comparative platform for stock forecasting, points out the advantage of using hybrid deep learning models, and provides a solution for real-time financial forecasting which is scalable in nature.

Signature of the Supervisor