

DECLARATION

We hereby declare that the project report entitled "Stock Price Prediction and Management" is an authentic record of our own work carried out at the Department of Computer Science and Engineering, Techno India University, West Bengal, during the 7th semester of the academic year 2025-2026 under the supervision of Jayanta Chaudhuri, Assistant Professor.

We further declare that the matter embodied in this project report has not been submitted by us for the award of any other degree or diploma of this or any other Institute/University.

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ABSTRACT

This project implements a full-stack Stock Price Prediction and Management system that integrates Linear Regression-based stock price forecasting with financial news sentiment analysis, embedded into a simulated trading and portfolio management web application. The system supports user registration/login, a virtual wallet, buy/sell transactions with broker commissions, dividend recording, portfolio tracking, and an admin monitoring dashboard. For a given stock symbol, the platform fetches historical market data, generates a 7-day forecast, computes an error metric (RMSE), summarizes recent sentiment (positive/negative/neutral), and provides a combined decision recommendation.

Keywords: Stock price prediction, linear regression, sentiment analysis, portfolio management, Flask, time series.

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