Summary

Stock price forecasting is one of the most difficult tools for market analysis. Forecasting depends on a number of variables that contribute to changes in supply and demand. Predicting the value of a ratio is an important complication in machine learning. With the help of time series data and neural networks, we can infer trends from historical records. Forecasting the price of financial market indices is very important for investment decisions, as it provides investors and speculators with the tools they need to maximize profits or avoid expected losses. The aim of this project is to use nonlinear forecasting models to forecast the Google Financial Market Index.

The data is derived from the daily Yahoo Finance database, which covers the period from January 3, 2005 to December 30, 2021. The study concluded that the Long Short Term Model (LSTM) has a high ability to predict the stock market based on the mean square error (MSE).

Keywords: Recurrent neural network, short-term memory, stock market, forecasting.