**Global stock market investment strategies based on financial network indicators using machine learning techniques**

This paper combines the varying markets around the world to form a network and use all of them to perform a time series forecasting on stock data using some simple machine learning algorithms such as regression, random forests and SVM. The paper uses the parameter of volatility for forecasting the Z-score of each stock indices and then applies two strategies to find out which one performs better with each algorithm.

**Forecasting stock crash risk with machine learning**

This paper experiments with various features in order to find out which feature is responsible towards the financial distress of a stock. It also sheds light on the use of NLP techniques in order to extract data from news articles and find the features of stock market which has the highest variability in its SHAP score. It also uses distance-to-default parameter. It mainly focuses on news articles and business news in order to predict the directions of stock market and look for crashes.

**Stock Price Pattern Prediction Based on Complex Network and Machine Learning**

This paper converts the problem of prediction into a classification one by not actually predicting the price but rather predicting the trend in the stock price. It considers 3 most popular stock indices of the US stock market. It finds the pattern of fluctuations in stock prices using returns and volatility and classifies them into 4 separate behaviours. It then constructs a graph for these parameters of 30 days for the entire training dataset. Centrality measures for these graphs are then calculated which act as input variables for KNN and SVM classification algorithms in order to perform prediction on testing data.

**Novel Method of Identifying Time Series Based on Network Graphs**

This paper uses a genetic algorithm in order to perform feature selection and gives these features as input variables to an artificial neural network in order to evaluate the buy-and-hold strategy.

**Novel Method of Identifying Time Series Based on Network Graphs**

This study experiments with various types of time series data and then converts them into graph. Each time series results in a separate kind of graph. The constant time series turns into a complete graph. The periodic time series like a sine graph turns into a regular graph and so on. The properties of the graph such as their centrality measures, clustering coefficient etc. gives information about the time series.

**A hybrid supervised semi-supervised graph-based model to predict one-day ahead movement of global stock markets and commodity prices**

This paper uses a semi-supervised approach by building a network of stock indices in the same time zone. The supervised portion of the model predicts the movement of stock market which then sends these results into the network. The research compares its results with the traditional classification methods such as KNN, SVM and Random Forests etc. with their model of HyS3 and Kruskal based graph construction.

**Factors Affecting Stock Prices in the UAE Financial Markets**

This research focuses on the development of the stock market in the United Arab Emirates (UAE) and aims to identify the key factors influencing stock prices in this emerging market. Covering the period from 1990 to 2005 and based on data from 17 companies, the study employs regression analysis with five independent variables, excluding oil price and dividend per share due to multicollinearity issues. Notably, the findings align with previous research, revealing a strong and positive impact of earnings per share (EPS) on UAE stock prices. Money supply and GDP exhibit expected positive coefficients, albeit statistically insignificant, while the consumer price index demonstrates a significant negative relationship with stock prices, particularly at the 1% confidence level, unlike the interest rate, which remains statistically insignificant.

**A method for automatic stock trading combining technical analysis and nearest neighbour classification**

This paper uses a nearest neighbour classifier and checks whether considering only historical data can be feasible in analysis of stock market or not. It uses technical indicators such as stop loss, stop gain, RSI filter as parameters for its own trading strategy. It compares the results of the traditional buy-and-hold strategy with its own. The variable to analyse here was profit which turned out to be better than the buy-and-hold strategy’s profit.