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Exploring Stock Market behaviour through Time Series Modelling

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Abstract: *Share market is a market that enables us to smooth exchange of buying and selling of company stocks. Every Stock Exchange has their own Stock Index value. Index is the average value that is calculated by combining several stocks. This helps in representing the entire stock market and predicting the market's movement over time. The Equity market can have a profound impact on people and the country's economy as a whole. Therefore, predicting the stock trends in an effective manner can minimize the risk of investing and maximize profit. In this paper, the Time Series Forecasting methodology for predicting and visualizing the predictions was used. The focus for prediction was based on the technical analysis using historic data and moving averages. Least squares method of trend analysis model has been used extensively in the field of finance and economics as it is known to be robust, efficient and has a strong potential for short-term share market prediction.*

Keywords: *Least square method (LSM), Stock market, Forecasting, Model, Prediction.*

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Introduction:

The stock market is a general term which refers to the collection of markets where the issuing and trading of equities, bonds and other sorts of securities takes place through various physical and electronic exchanges and over the counter market. The stock market is one of the most significant of a market economy, because it provides companies with access to capital by allowing investors to buy shares of ownership in a company. The arena of stock market is constantly developing under the process of refinements. Considering the variations, investors need to plan intensively to make profit. Forecasting the stock exchange data includes an assumption that the information publicly available at present has some predictive relationships to the future stock returns. Stock trend forecasting is one of the most difficult tasks to achieve in finance market because of the difficulty in the highly intricate world of stock market. The investors in the stock market always find a technique that can guarantee easy profiting by forecasting the stock