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(57) Abstract :

Accurate stock market prediction is of great interest to investors; however, stock markets are driven by volatile factors such as micro blogs and news that make it hard to predict stock market indexes based on merely the historical data. The enormous stock market volatility emphasizes the need to effectively access the role of external factors in stock prediction. Stock market can be predicted using machine learning algorithms on information contained in social media and financial news, as this data can change investors' behavior. In this invention, we use algorithms on social media and financial news data to discover the impact of this data on stock market prediction accuracy for ten subsequent days .For improving performance and quality of predictions, feature selection and spam tweets reductions are performed on the data sets. Our experimental result show that highest prediction accuracies of 80.53% and 75.16% are achieved using social media and financial news, respectively. Support Vector Machine is a machine learning technique used to forecast stock prices. This study uses daily closing prices for 34 technology stocks to calculate price volatility and momentum for individual stocks and for the overall sector. These are used as parameters to the SVM model. The model attempts to predict whether a stock price sometime in the future will be higher or lower than it is on a given day. We find little predictive ability in the short-run but definite predictive ability in the long-run.

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