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Stock Price Prediction Using Random Forest Method and Twitter Sentiment Analysis

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Abstract: *Stock price forecasting could be a vital and thriving topic in financial engineering especially since new techniques and approaches on this matter are gaining ground constantly. Within the contemporary era, the ceaseless use of social media has reached unprecedented levels, which has led to the belief that the expressed public sentiment could be correlated with the behaviour of stock prices. The concept is to acknowledge patterns which confirm this correlation and use them to predict the future behaviour of the assorted stock prices. With little doubt, though uninteresting individually, tweets can provide a satisfactory reflection of public sentiment when taken in aggregate. We develop a system which collects past tweets, processes them further, and examines the effectiveness of varied machine learning techniques like Naive Bayes Bernoulli classification and Support Vector Machine (SVM), for providing a positive or negative sentiment on the tweet corpus. Subsequently, we employ the identical machine learning algorithms to research how tweets correlate with exchange price behaviour. Finally, we examine our prediction's error by comparing our algorithm's outcome with next day's actual close price. Overall, the final word goal of this project is to forecast how the market will behave within the future via sentiment analysis on a collection of tweets over the past few days, also on examine if the idea of contrarian investing is applicable. the ultimate results seem to be promising as we found correlation between sentiment of tweets and stock prices.*

Keywords: Stock Market Prediction, Sentiment Analysis, Twitter, Machine Learning

REFERENCES

[1] Ashish Sharma, Dinesh Bhuriya, Upendra Singh. "Survey of exchange Prediction Using Machine Learning Approach",ICECA,2017.
[2] Loke. K.S. "Impact of monetary Ratios And Technical Analysis On Stock Price Prediction Using Random Forests", IEEE,2017.
[3] Xi Zhang1, Siyu Qu1, Jieyun Huang1, Binxing Fang1, Philip Yu2, "Stock Market . Prediction via Multi-Source MultipleInstanceLearning." IEEE 2018.
[4] VivekKanade, BhausahebDevikar, SayaliPhadatare, PranaliMunde, ShubhangiSonone. "Stock Market Prediction: Using Historical Data Analysis", IJARCSSE 2017.
[5] Jabaseeli, A. Nisha, and E. Kirubakaran. "A Survey on Sentiment Analysis of (Product) Reviews." International Journal of Computer Applications 47.11, 201
[6] Agarwal, Apoorv, et al. "Sentiment analysis of twitter data." Proceedings of the Workshop on Languages in Social Media. Association for linguistics, 2011
[7] a. Mittal and a. Goel. "Stock Prediction Using Twitter Sentiment Analysis." Tomx.Inf. Elte.Hu, (June), 2012.
[8] a. Mittal and a. Goel. Stock Prediction Using Twitter Sentiment Analysis. Tomx.Inf.Elte.Hu, (June), 2012. ˚
[9] F. . Nielsen. A new ANEW: evaluation of a word list for sentiment analysis in microblogs. In M. Rowe, M. Stankovic, A.-S. Dadzie, and M. Hardey, editors.
[10] A. Pak and P. Paroubek. Twitter as a Corpus for Sentiment Analysis and Opinion Mining. Lrec, pages 1320–1326, 2010.