

PREDICTING STOCK MARKET TRENDS THROUGH SOCIAL MEDIA

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PROBLEM

1. Can we apply Sentiment Analysis and Machine Learning techniques to find the correlation between “Public Sentiments” and “Market Sentiments”?
2. If yes then, Can we predict the stock market trends using these two sentiments?

APPROACH

- Collect Twitter and Stock Market data.
- Preprocess the Stock Market data.
- At the same time, the tweets are fed to the sentiment analysis algorithm to determine whether each tweet is “Bullish” or “Bearish”.
- The classified tweets and the stock data are then fed to our model to find correlation between tweets and stock data.
- If correlation exists then the model predicts the stock market trend.

DATA

1. Twitter

- We will collect only those tweets which contains the selected ticker symbols in its text. (e.g. \$GE for General Electric)
- Data will be considered from Oct 26 to Nov 20.
- We will only consider the text and timestamp of the collected tweets.
- Twitter Streaming API will be used to collect the tweets.

2. YAHOO! FINANCE

- Standard Stock Data (Open / Close / High / Low / Volume) for every Trading-Day from Oct 26 to Nov 20 (4 weeks).
- We will only collect data of Dow Jones Industrial Average and its 30 components.

TIMELINE

- By Oct 24 :-
Develop Application to collect desired data.
- By Oct 31 :-
Develop Application to classify the tweets into “Bullish” or “Bearish” tweet.
- By Nov 10 :-
Predict whether the stock will be “Bullish” or “Bearish”.
- Oct 26 - Nov 20 :-
Collect twitter and stock market data (4 weeks).
- By Nov 25 :-
Check the accuracy of the predicted results.