

CS510 Midterm Coding Topic: Francis Kurian

Topic: IBM Watson Sentiment Index and Stock Price Sensitivity Analysis

IBM Watson APIs are helpful in extensive text analysis. It provides sentiments analytics by detecting emotional and language tones in written text. One application area is stock market price prediction using some index that incorporate market sentiments and emotions expressed by the market participants, news feeds and other analysts.

Objective: Understand and relationship between stock prices and market sentiments using various plots and statistical techniques. Conduct such analysis for a list of companies.

Computational Steps:

- Read timeseries stock price, sentiment scores and other related variables at a company level. Write functions to process multiple files.
- Transform data for analysis: variable formats, log or lag transformations, daily, weekly and monthly summaries. Return calculations.
- Generate plots to infer data relationships
- Use statistical functions like correlation or regression to quantify relationships.
- Create report for a list of companies.