Abstract

Social media has become an important tool for marketing, self-expression, and even news for corporations. This project aims at developing a tool to extract and analyze a live Twitter feed based on a keyword or phrase. The sentiment of each tweet will be scored in order to give the user an idea of the overall ‘mood’ of a topic or even product. By understanding the sentiment of consumers, a company would have a competitive edge by being able to identify patterns and possibly predict future trends.

This was accomplished using AFFIN-based sentiment analysis to determine whether a tweet’s mood is positive, negative, or neutral. The UI is composed of color-coding, a map, emoji’s, and score placed on each tweet reflecting sentiment. The simplicity of the application allows for high readability and understandability. The application was also optimized using bootstrap in order to create a responsive web and mobile application.

Results

This application supports the search of a keyword or phrase, it will then continue to extract and analyze twitter public data, using AFINN sentiment analysis engine.

Search Bar
- Allows user pause, resume or clear map & twitter feed.
- Displays the keyword or phrase searched.

Leaflet/Map Markers
- Tweets with geolocation are displayed.
- Reflects sentiment of each tweet with emoji’s ranging from very negative, negative, neutral, positive, and very positive.
- Map clears after 1 minute to avoid cluttered markers.

Twitter Feed
- Reflects sentiment analysis and score of each tweet by color coding.
- Differentiate tweets with or without geolocation.
- Icon link provides origin of tweet.

Impact

This application facilitates the understanding of sentiment analysis and statistical results. Made with a simplicity and easy to use interface. Raytheon can target the following:
- Market movement and trends.
- Customer reviews, or public opinions.
- Improve & innovate new technologies

Metric

Thirty UTD students tested our Twitter sentiment analysis tool and compared it to other similar tools, and agreed to complete a survey. The following applications were compared, Raytheon, Tweet Viz, Social Mention.

Raytheon scored the highest!