Twitter Sentimental Analysis Using Machine Learning & R

❖ Why Sentiment Analysis –

Suppose we have an application which is very famous, and has around billion users and we decide to add a new functionality to our application, then how will we get feedback for it? With sentiment analysis we can focus on our negative posts and improve our application.

❖ What is sentiment analysis –

The process of computationally identifying and categorizing opinions expressed in a piece of text, especially in order to determine whether the writer's attitude towards a particular topic, product, etc. is positive, negative, or neutral.

❖ Twitter –

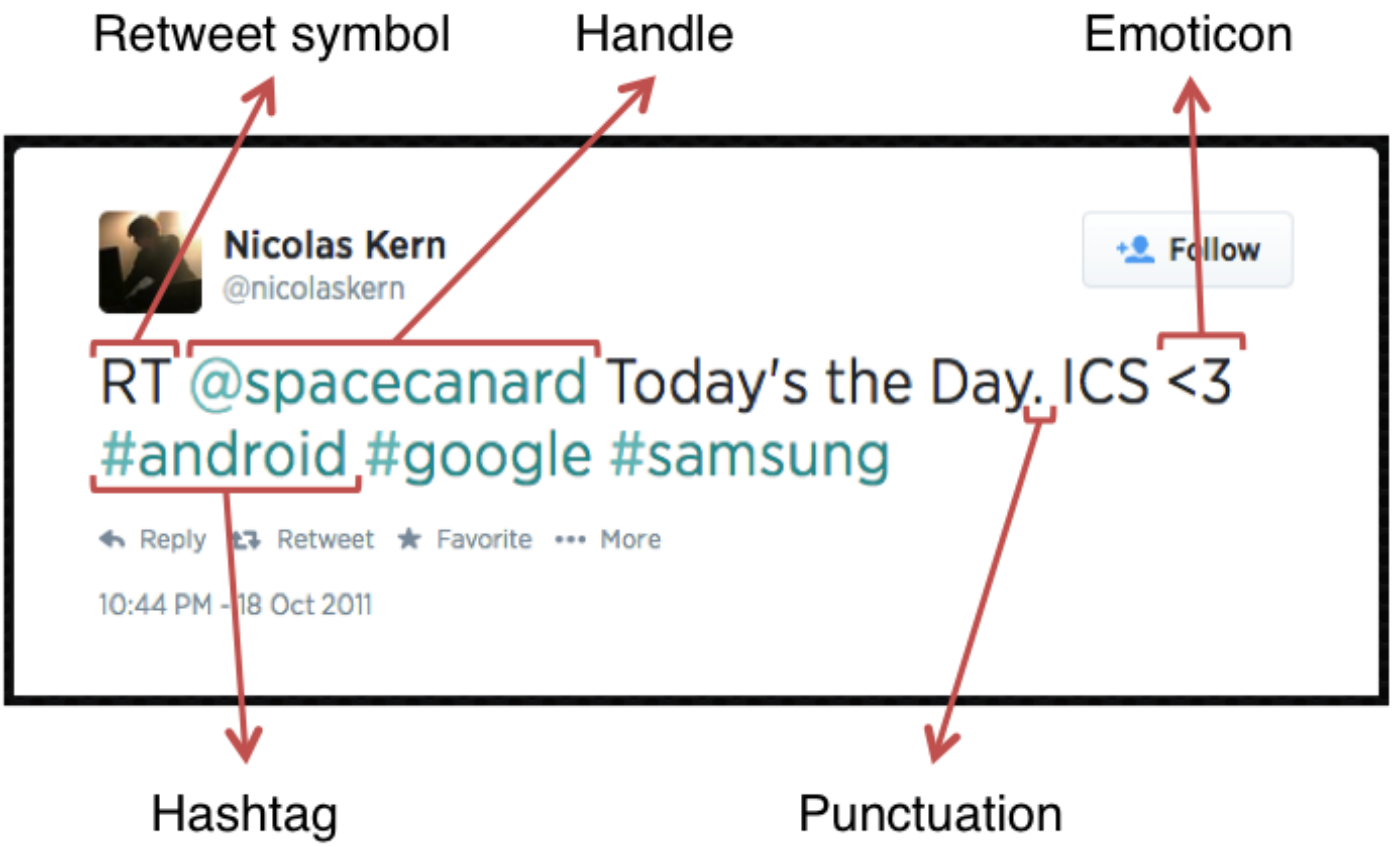
Twitter is an online social networking and micro-blogging service that enables users to create and read short messages, called "Tweets". It is a global forum with the presence of eminent personalities from the field of entertainment, industry and politics. People tweet about their life, events and express opinion about various topics using text messages limited to 140 characters. Registered users can read and post tweets, but any unregistered users can read them. Twitter can be accessed via Web, SMS, or mobile apps.

❖ Objectives –

- ❖ To implement an algorithm for automatic classification of text into positive, negative or neutral.
- ❖ Sentiment analysis to determine the attitude of the mass is positive, negative or neutral towards the subject of interest.
- ❖ Graphical representation of the sentiment.

❖ Steps for analysis –

- ❖ Data collection using Twitter API
- ❖ Data Preprocessing
- ❖ Applying classification algorithms
- ❖ Classified tweets
- ❖ Sentiments in graphical representation



❖ Software Requirements libraries and languages used

- Windows 7 or higher
- R 3.4.4 or higher
- R studio with shiny package
- Notepad++
- Twitter API, Google API
- Modern Web Browser

❖ Hardware Components:

- Processor – Dual Core
- Hard Disk – 50 GB
- Memory – 1GB RAM

❖ Advantages:

- Allows for automated sentiment analysis system.
- Adjust Marketing Strategy.
- A sentiment analysis is like personal lifeguard to make sure that we are truly listening to what our customers think, want and need.
- Improve Customer Service

❖ Challenges

- A positive or negative sentiment word may have opposite orientation in different application domains.
- Sarcastic sentences with or without sentiment words are hard to deal.
- Many sentences without sentiment words can also imply opinions.
- A sentence containing sentiment words may not contains any sentiments.

❖ Application:

- This system can be used for online sentiment analysis system.
- The system can also be implemented in different organizations that wants to read the mood of the users and improve its customer service.