Brand Monitoring Tool

Problem statement

Brand Monitoring is listening to what customers say on social networks about brands. Social media listening is becoming an essential tool for companies for building relationships with consumers and protecting a brand's reputation. Brand monitoring has a variety of applications within an enterprise. It can be used for marketing, product research, public relations, customer experience management etc.

Data Source

I focused on analyzing data collected from the Twitter APIs. Twitter is the best social media tool for understanding real time trends. Monitoring Twitter is crucial to understand customers and competitors. The right analysis can help in discovering new trends, highlighting important discussions and revealing what customers care about.

Analysis to be performed

Target audience for this analysis would be business partners in the marketing department. I believe the most important analysis that provide valuable insights to this audience are:

- Understanding of sentiment of the tweets and the overall perception of the brand
- The topics and keywords related to the brand
- The reach and engagement of the brand
- Segmenting sentiment, brand perception and reach by geography - for national brands
- General analytics such as frequency of mentions, top hashtags, top users etc

Initial data analysis

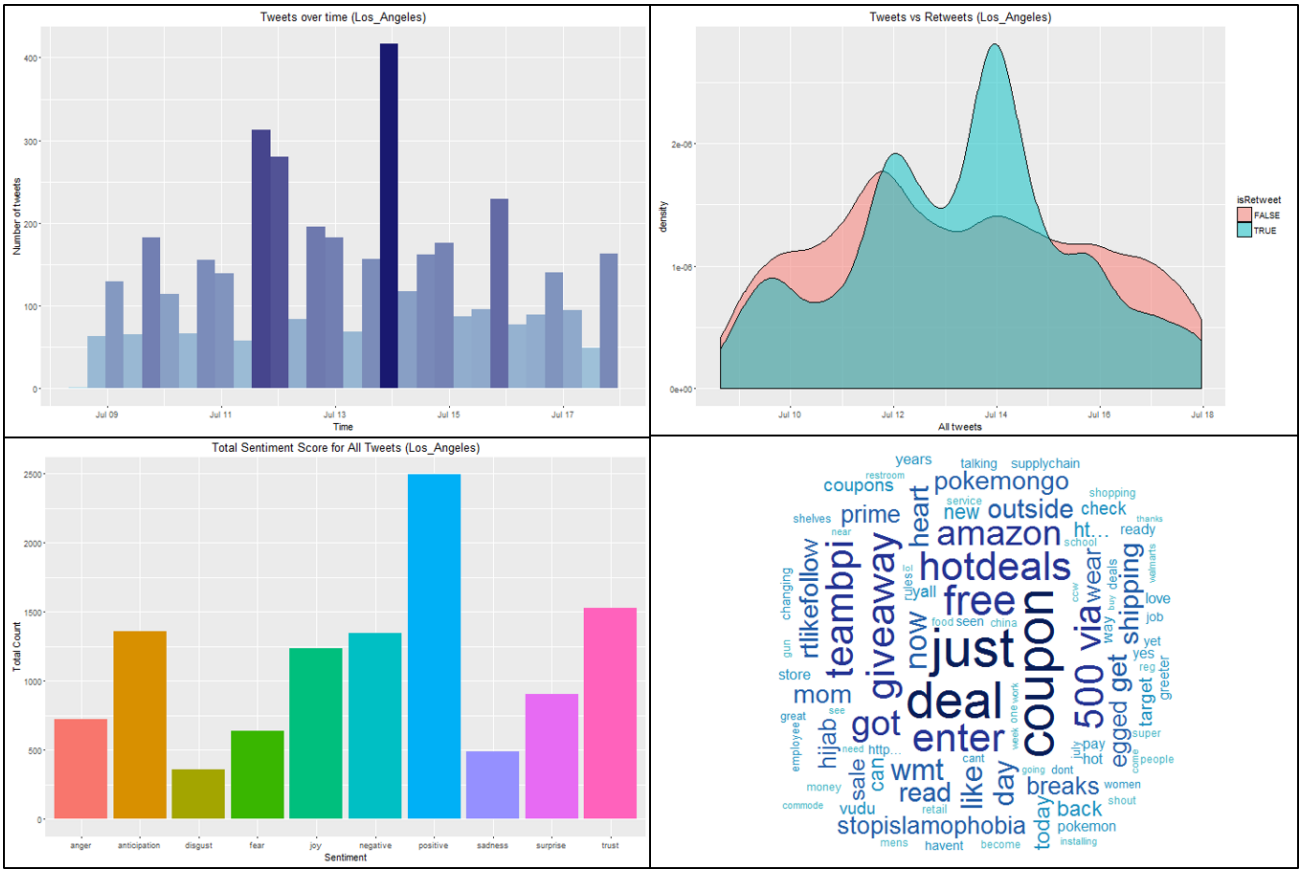
I wrote a prototype brand monitoring tool to test out the viability of my idea and to evaluate whether such a tool will lead to useful business insights for my target audience. My program downloads data from the Twitter APIs. I focused on finding on how people tweet and what they tweet about.

A high level description of the steps involved in my analysis are:

- I focused on tweets talking about the brand Walmart. Specifically I collected all tweets with the hashtag "#Walmart"
- I concentrated on grouping the data geographically around a few key US cities. I will dive deeper into data from Los Angeles and New York in the rest of this discussion.
- I performed some first order analysis on the data like frequency of tweets, the number of original tweets vs retweets etc. I am trying to answer some questions like what are the tweeting patterns I am trying to understand tweeting behavior.
- In the next part I want to look at what people tweet. I created word clouds based on this data - which highlight the most commonly occurring words in this data. The word cloud tells us immediately what words were used and how frequently they were used.
- Lastly, I tried to derive a little more understanding of the tweets, ie to try and categorize the feelings of the tweet. For this, I performed sentiment analysis on data using used Jocker's "syuzhet" library.

Insights from the tool

Analysis of tweets from LA



Plot 1: Analysis of tweets from Los Angeles

Key Observations

- From the plot of tweets over time, we see that there are two days with a lot of tweets: July 12th and July 14th. July 12th was a peak for NYC tweets as well.
- User engagement (represented by the blue peaks in the chart) was very high on both these days.
- From the Word Cloud, we see that people were mostly talking about promotions represented by words such as “deal”, “coupon”, “hotdeals” etc.
- The primary sentiment was **positive.**

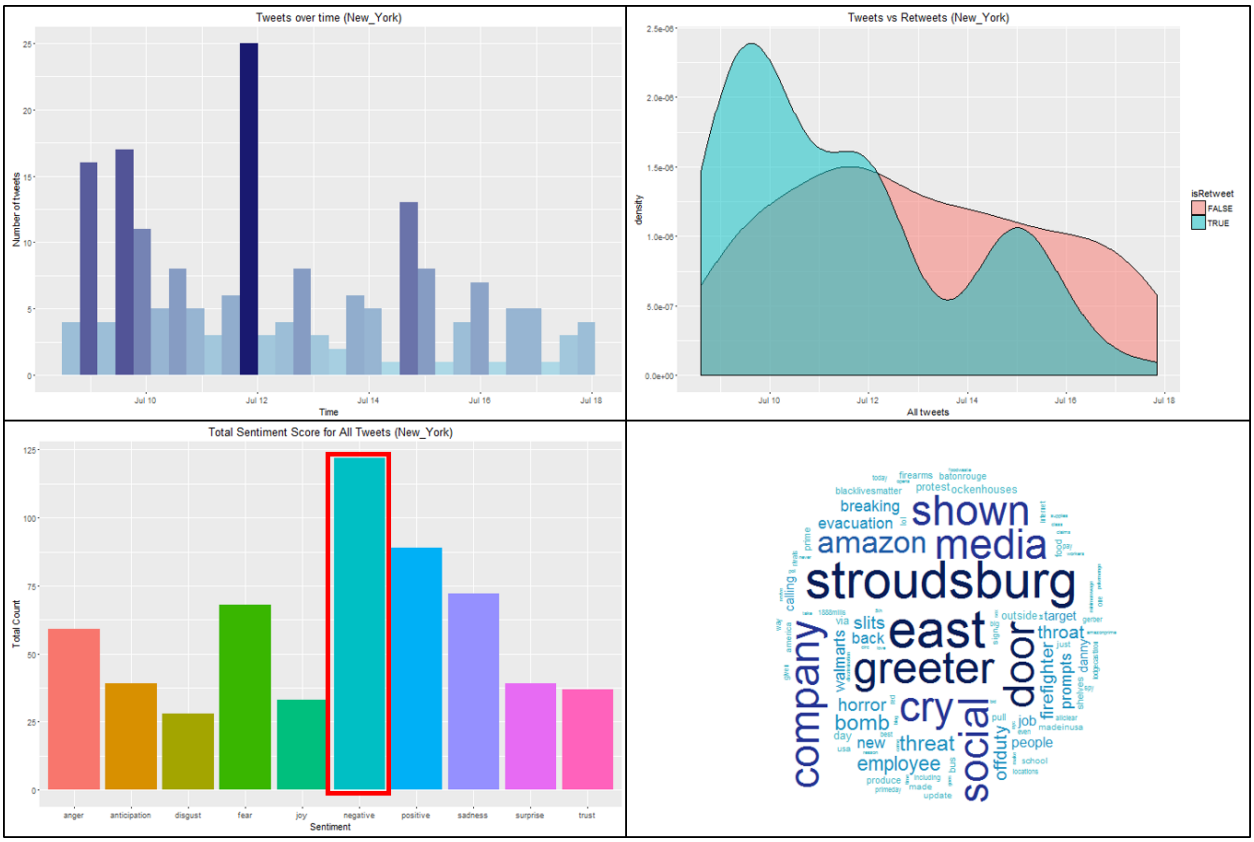
Key Insights

- July 12th was “Amazon Prime Day”, a massive sale on Amazon. Walmart launched a free shipping program for the entire week to compete with Amazon’s prime program - which explains keywords like “amazon” and “shipping” in the tweets
    - The sentiment on these tweets will allow marketers to get real time feedback on customer perception of this promotional program
    - This explains the peak traffic in LA and NYC on July 12th

- Another interesting keyword in the word cloud is “Pokemongo”. Pokemon Go is the latest sensation in mobile games. A lot of Walmart stores are Pokemon Go stops in the game. This is driving a lot of traffic to those Walmart’s (or atleast the parking lots), and explains the hashtag
    - **This would be a fantastic insight for a marketer to react to an emerging trend and try to monetize the foot traffic that Pokemon go is bringing in**

- Another prominent keyword in the word cloud was “stopislamophobia” and “hijab”. In an unfortunate event of racial hatred, a muslim woman wearing a hijab was egg shelled at a Walmart in California on July 14th. This caused an uproar among several twitter users, which explains the peak traffic on July 14th.
    - Keeping a pulse on such events as they unfold and responding in a timely manner are crucial to maintain a brand’s reputation.

Analysis of tweets from NY



Plot 2: Analysis of tweets from NYC

Key Observations

- From the plot of tweets over time, we see that there are two days with a lot of tweets: July 9th and July 12th
- User engagement (represented by ratio of retweets vs original tweets) was very high on July 9th and 10th
- **The primary sentiment was negative**

Key Insights

- A marketer should be immediately notified if the overwhelming sentiment associated with the brand is negative, and a tool like this can be very effective.
- Looking at the word cloud, “east” “stroundsburg” is the most commonly occurring word. I investigated this further using a Google search

    - It appears that Walmart introduced a new policy for front door greeters to be responsible for additional work, which required physical capability of lifting about 50 pounds.
    - The greeter at Walmart store in East Stroundsburg was a gentleman named “Danny Ockenhouse”. He was extremely popular with the local clientele. Danny had cerebral palsy due to which he was not able to fulfill the additional responsibilities. So the store laid off Danny on July 9th.
    - This frustrated the local clientele a lot, which explains the significant number of negative tweets as they voiced their opinion.
    - It also explains the high engagement on twitter

- This is an example of a policy decision taken by corporate headquarters driving a negative response at a local store. Timely notification of such an event can be invaluable for a modern day enterprise to manage its brand’s reputation.

As we can see from the analysis above, my initial prototype already led to some very relevant insights for marketing partners.