

Emotional Sentiment on Twitter

A coronavirus vaccine online firestorm

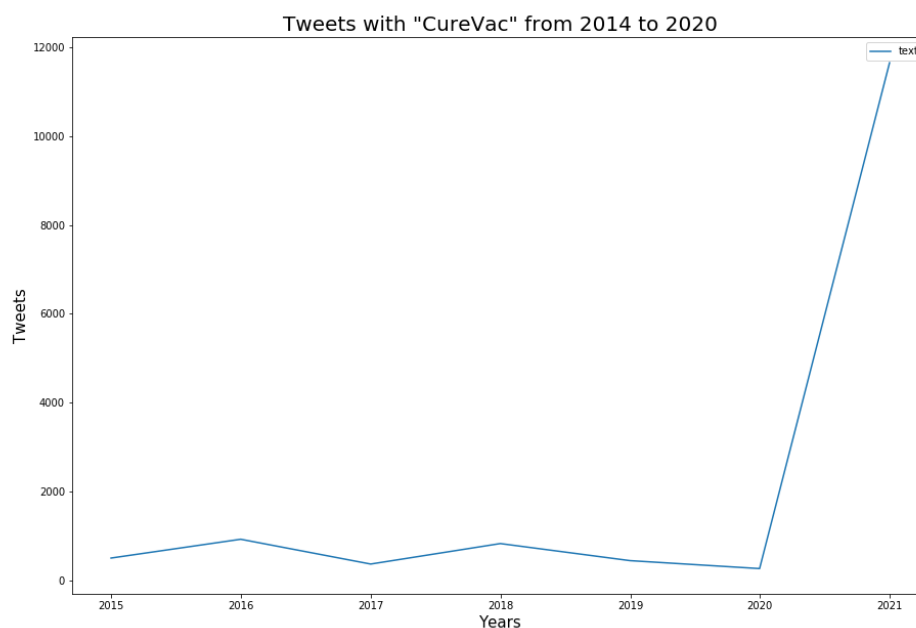
The ongoing competition for a viable vaccine against coronavirus is arguably the race of the century. With its hundred millions of users, Twitter is particularly well-suited for research into sentiment and emotions running in social media.

I collected the data scraping tweets from Twitter's application program inter-face (API), using TwitterScraper. Tweets were scraped using the search term "Curevac", the name of a German vaccine maker backed by Bill & Melinda Gates Foundation, and currently working on a Covid-19 vaccine.

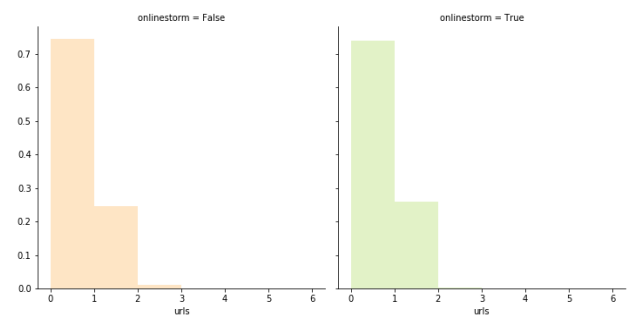
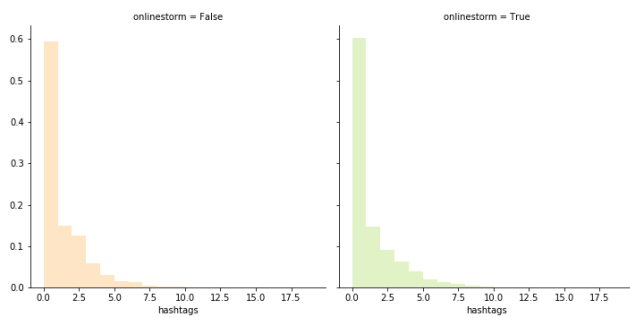
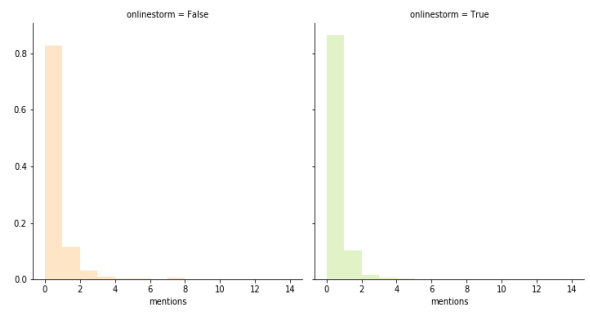
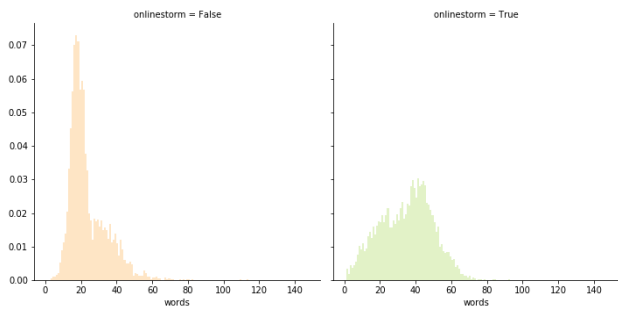
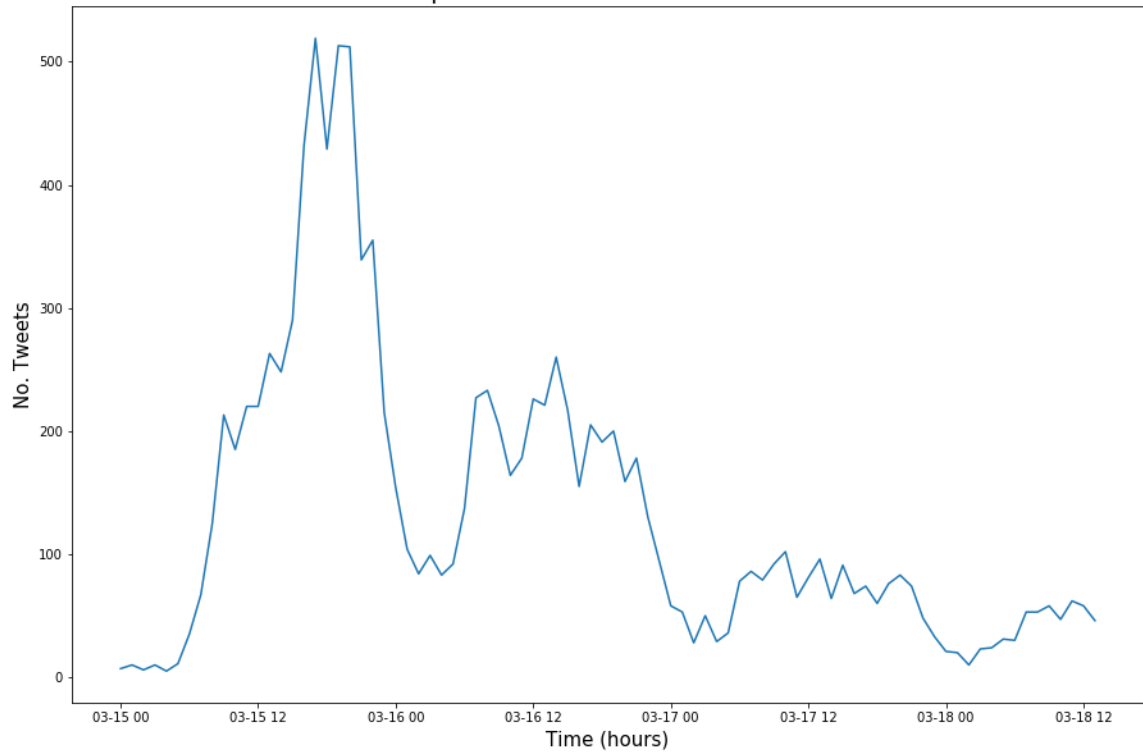
The analysis covers tweets from a 6-year period, from March 3, 2014 to March 18, 2020 ($N = 14,991$).

This pdf file includes the figures and charts produced in a jupyter notebook , as a result of the applications of some of the most common NLP (Natural Language Processing) techniques used to uncover patterns of sentiment and emotion on social media microblogging platforms like Twitter. The notebook is organized as follows:

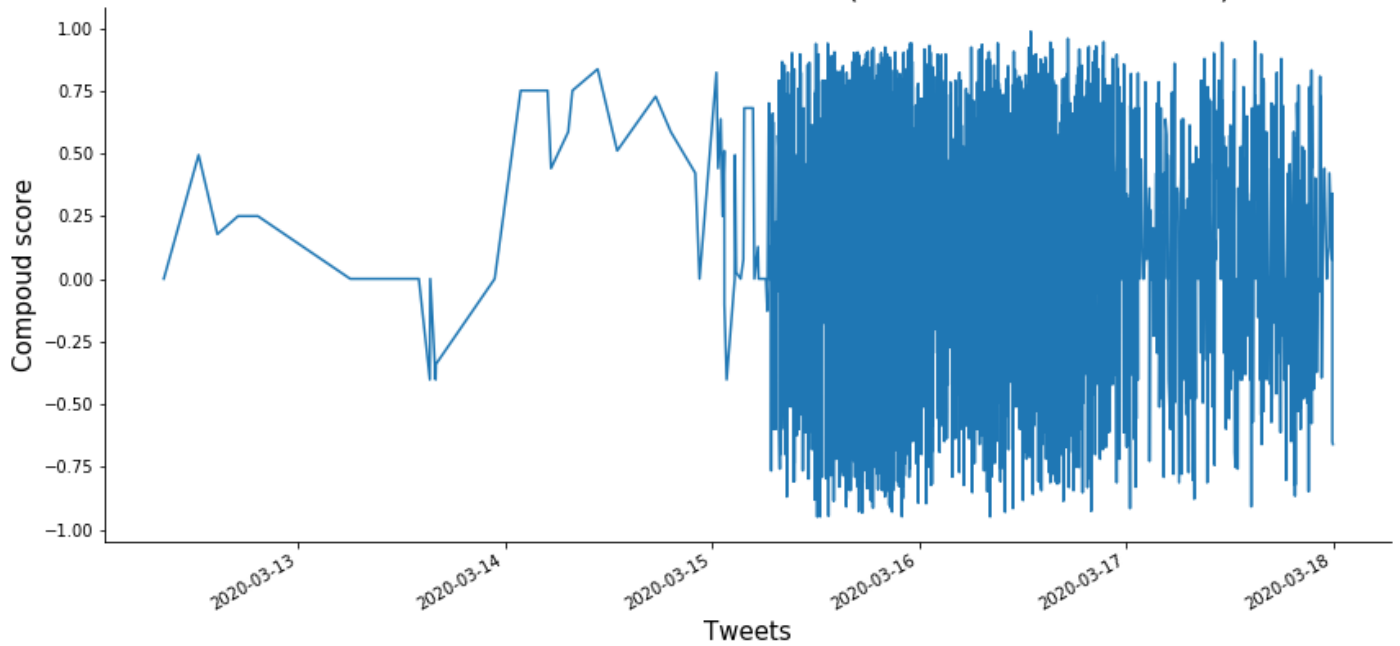
- Exploratory analysis
- Text processing
- Sentiment analysis
- Word frequency
- LDA topics extraction
- Emotion analysis



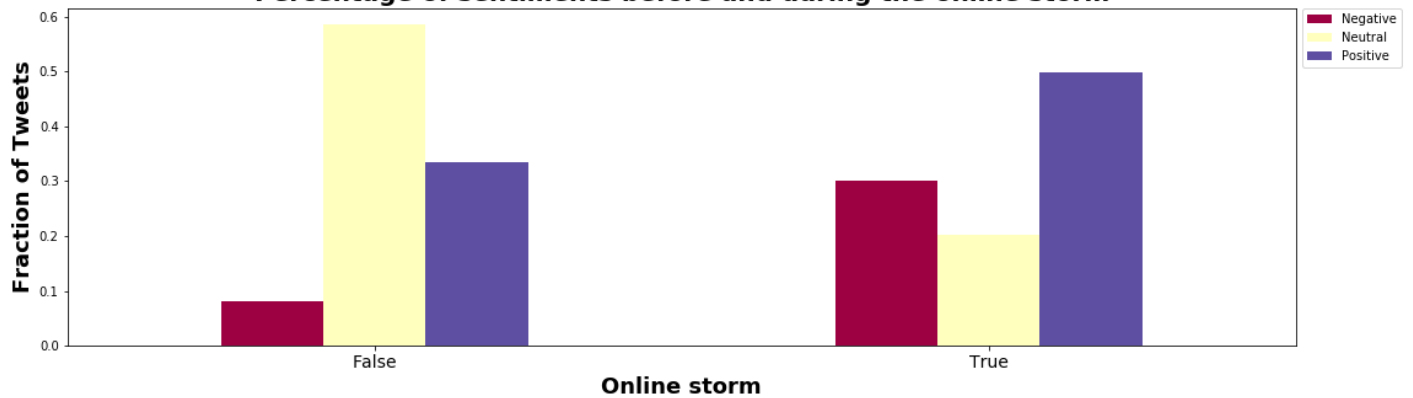
Tweets per hour from 15 to 18 March 2020

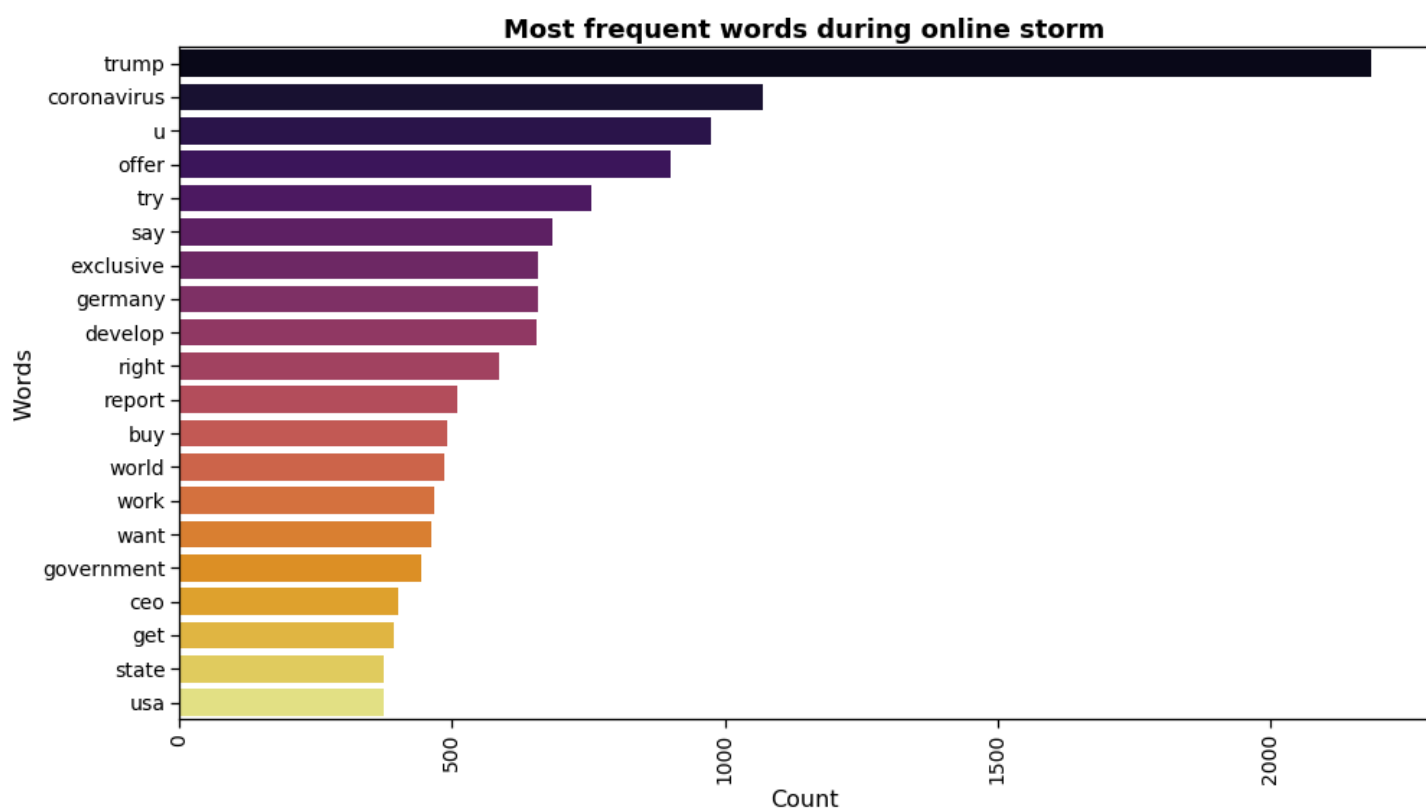
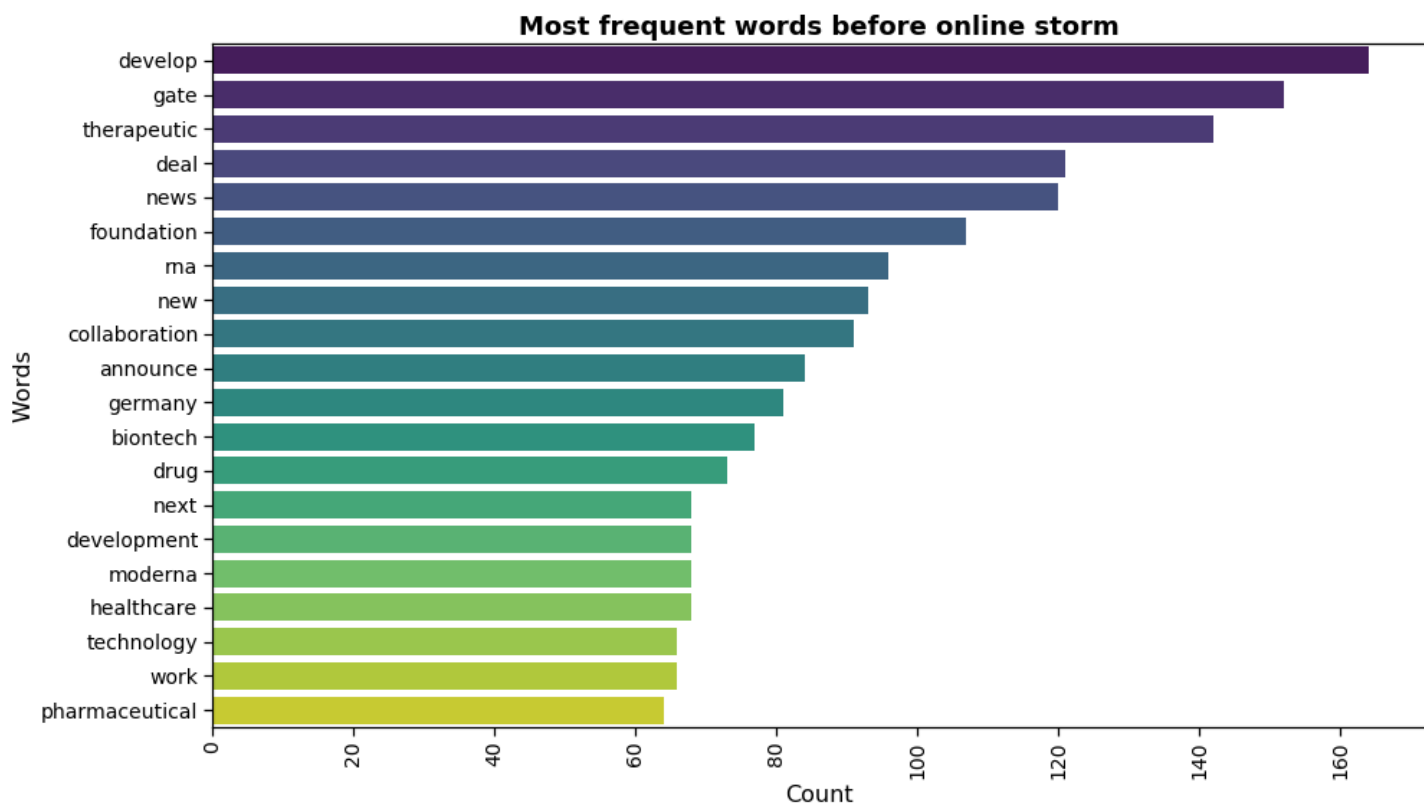


Sentiment on tweets with CureVac (12 March to 18 March)

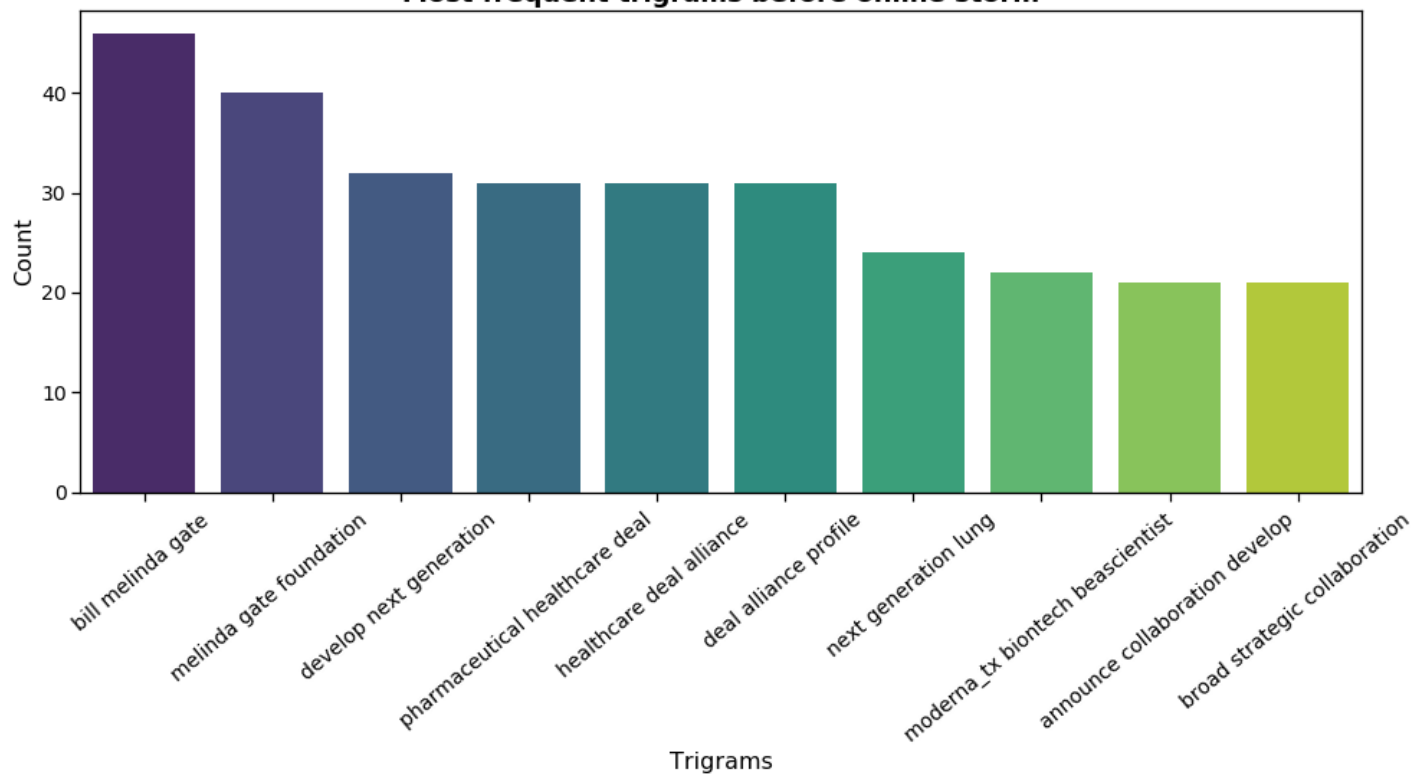


Percentage of sentiments before and during the online storm

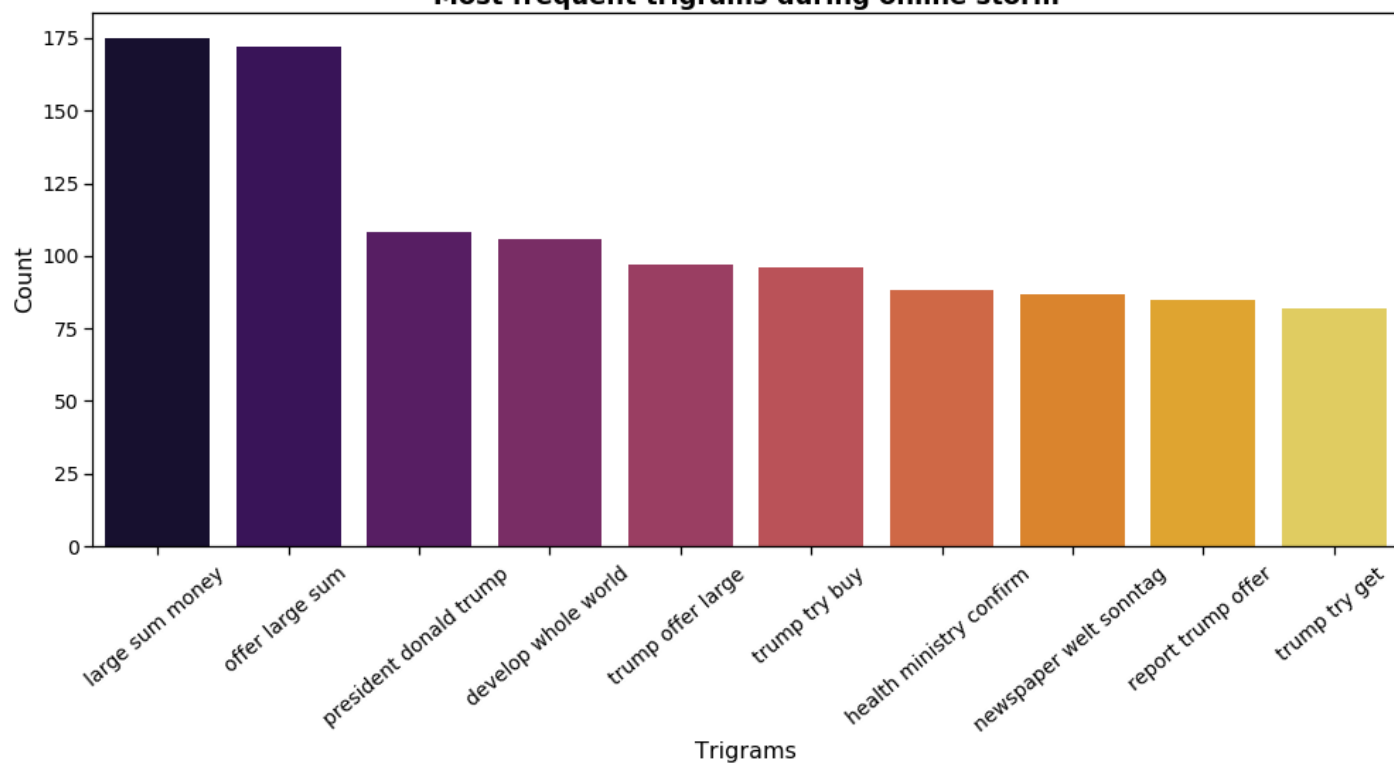




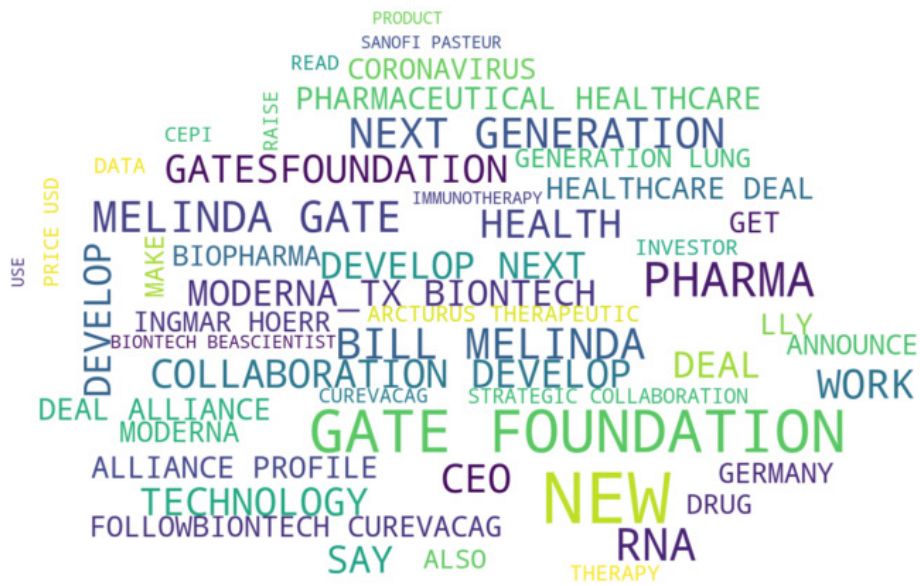
Most frequent trigrams before online storm



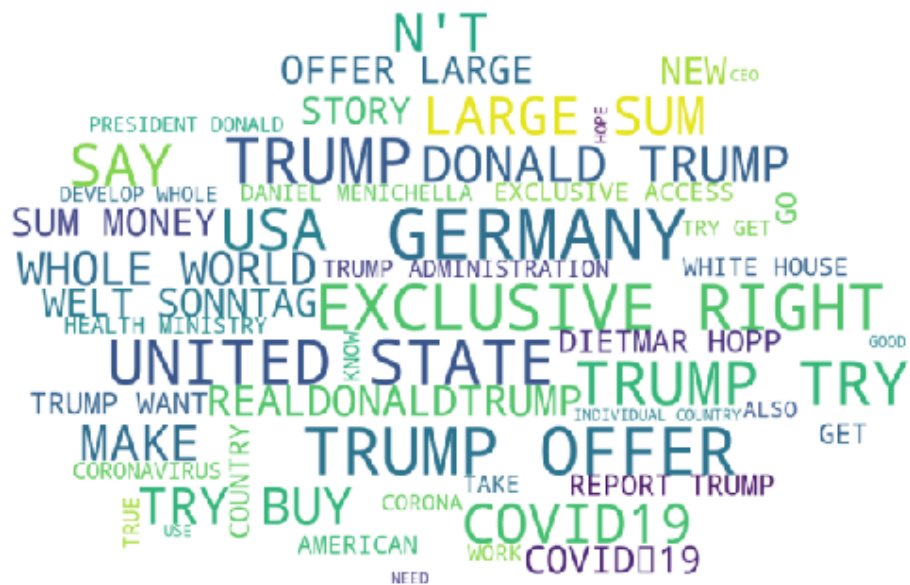
Most frequent trigrams during online storm

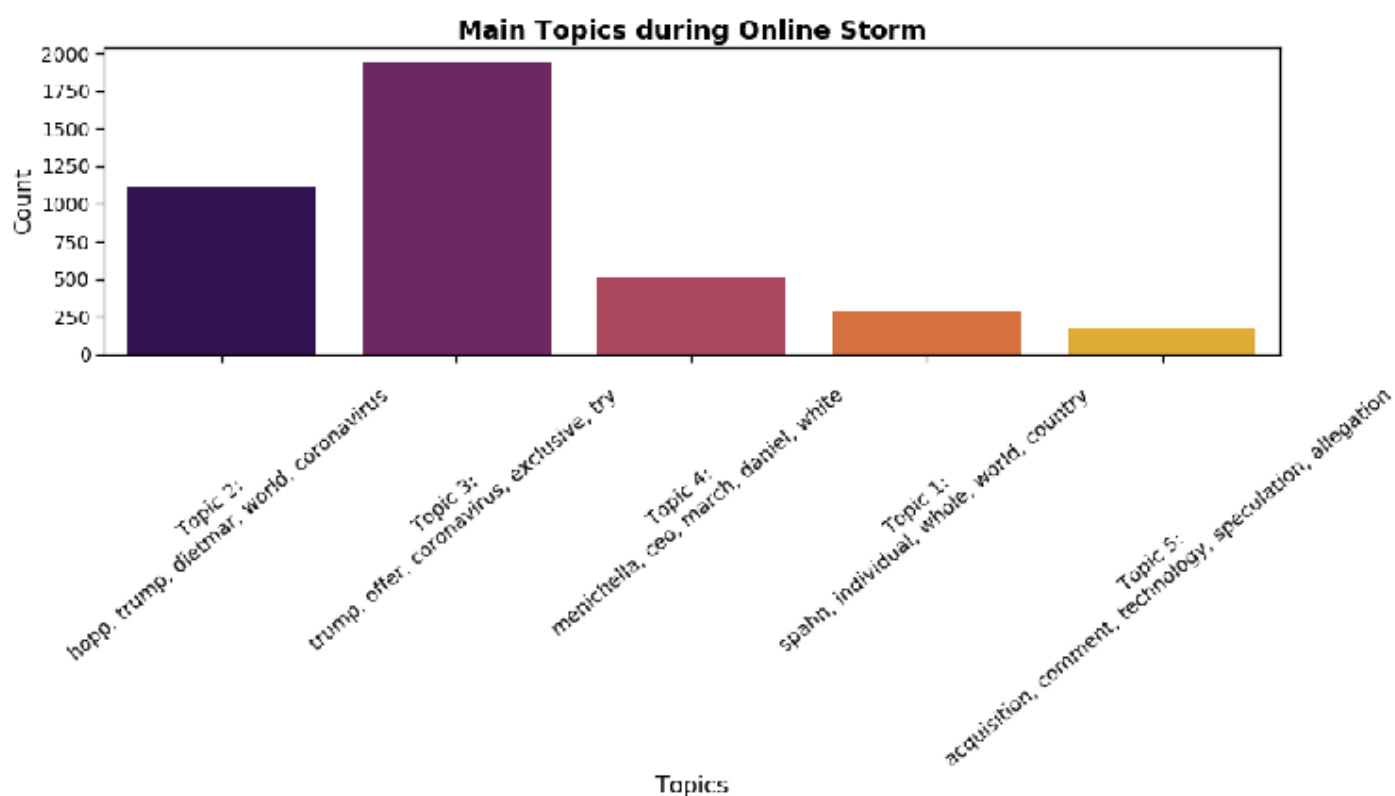
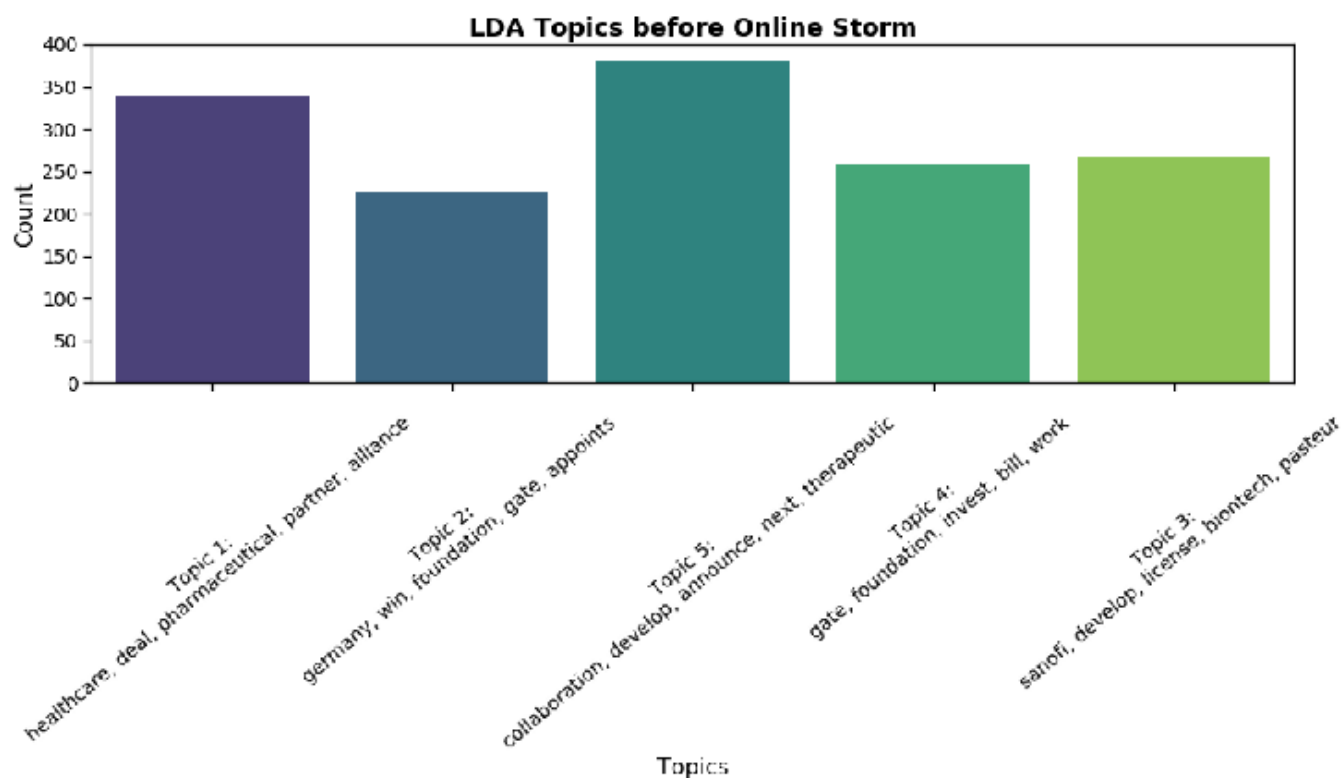


Wordcloud of most frequent words before online storm

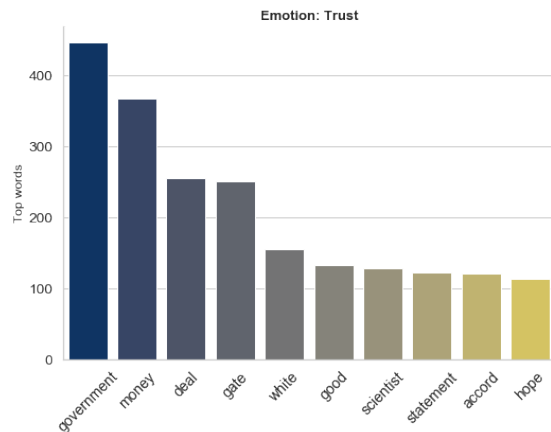
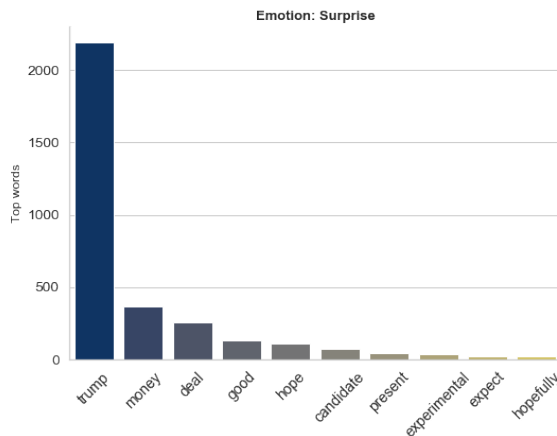
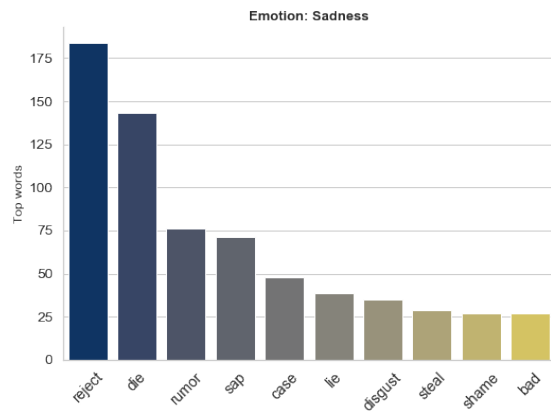
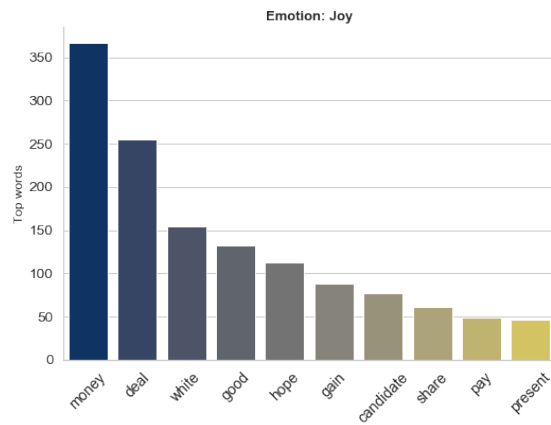
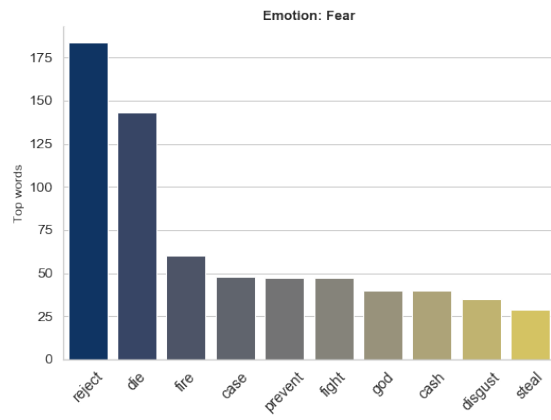
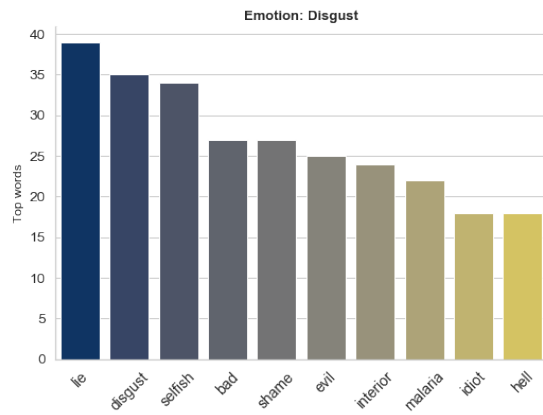
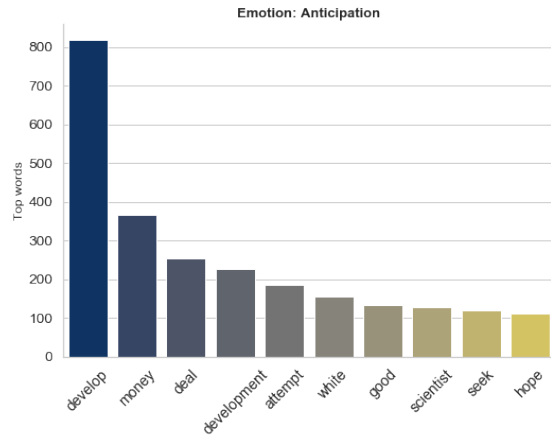
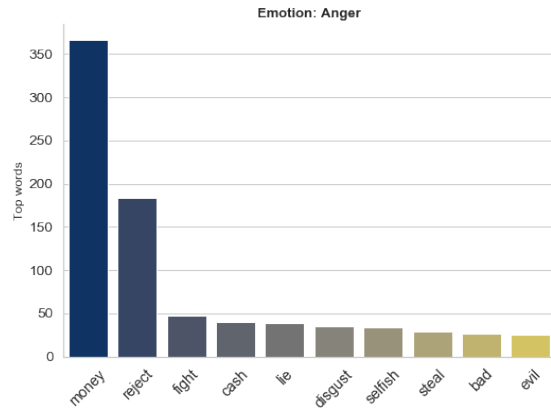


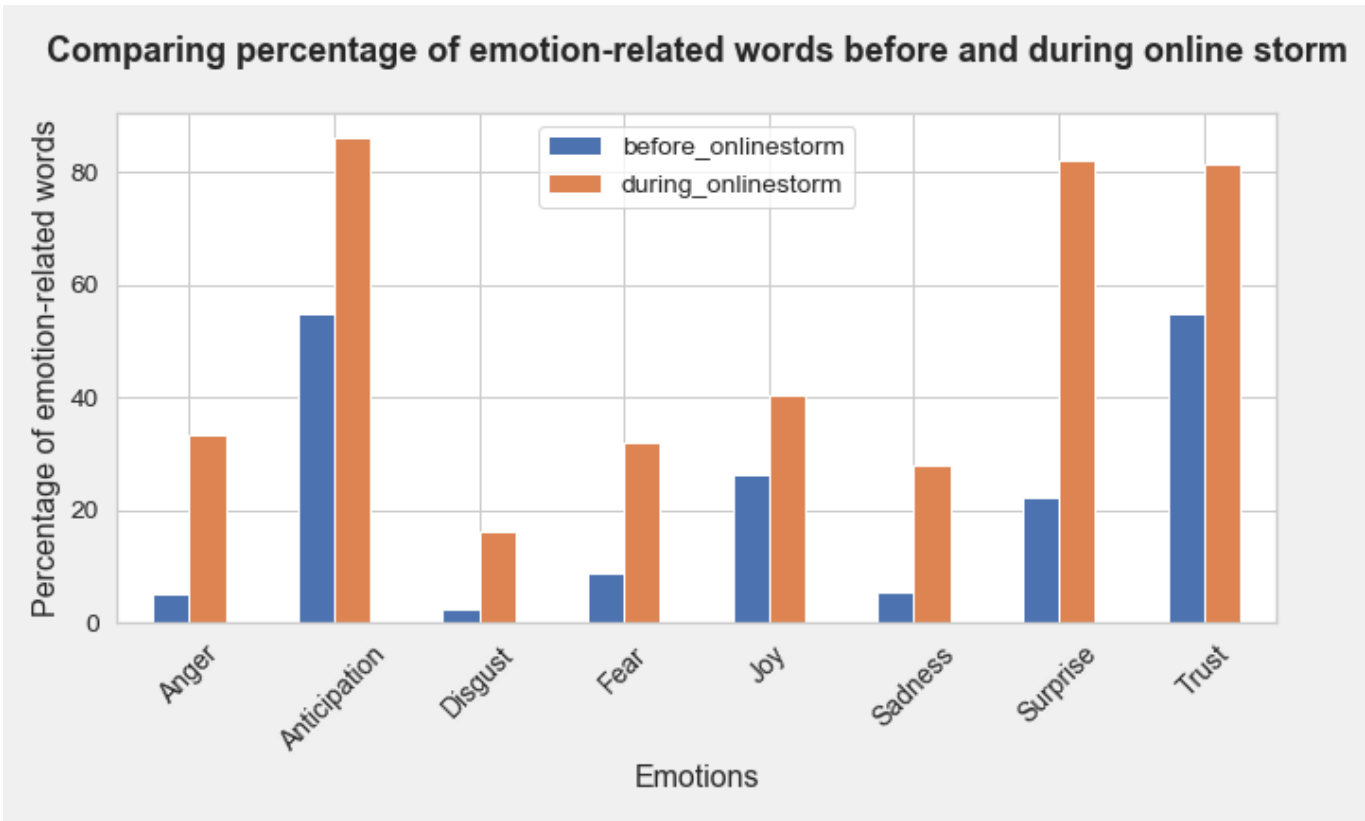
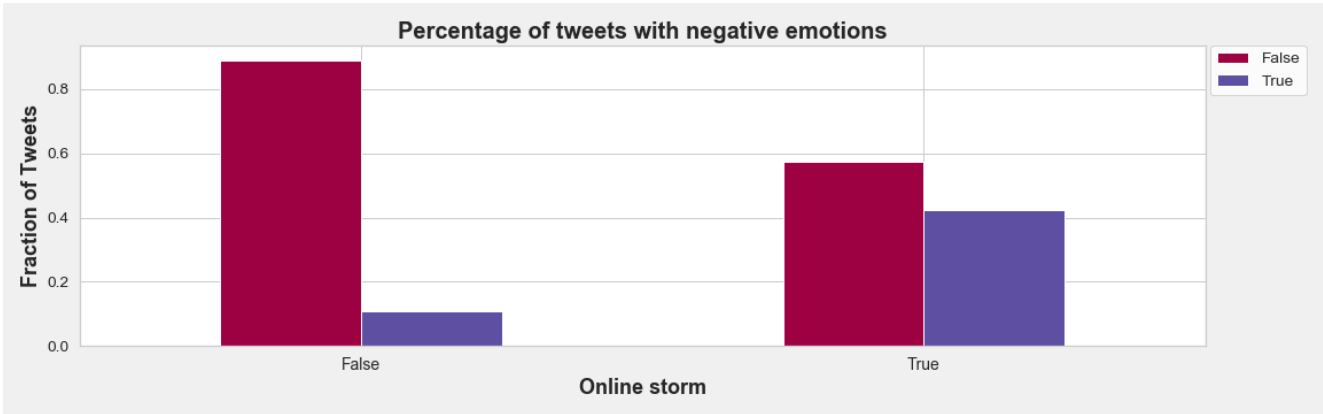
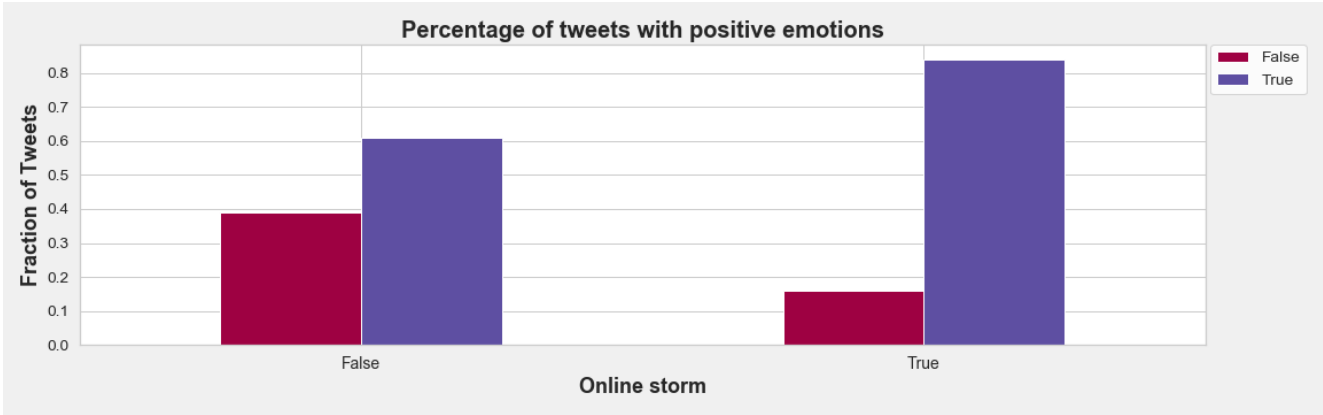
Wordcloud of most frequent words during online storm



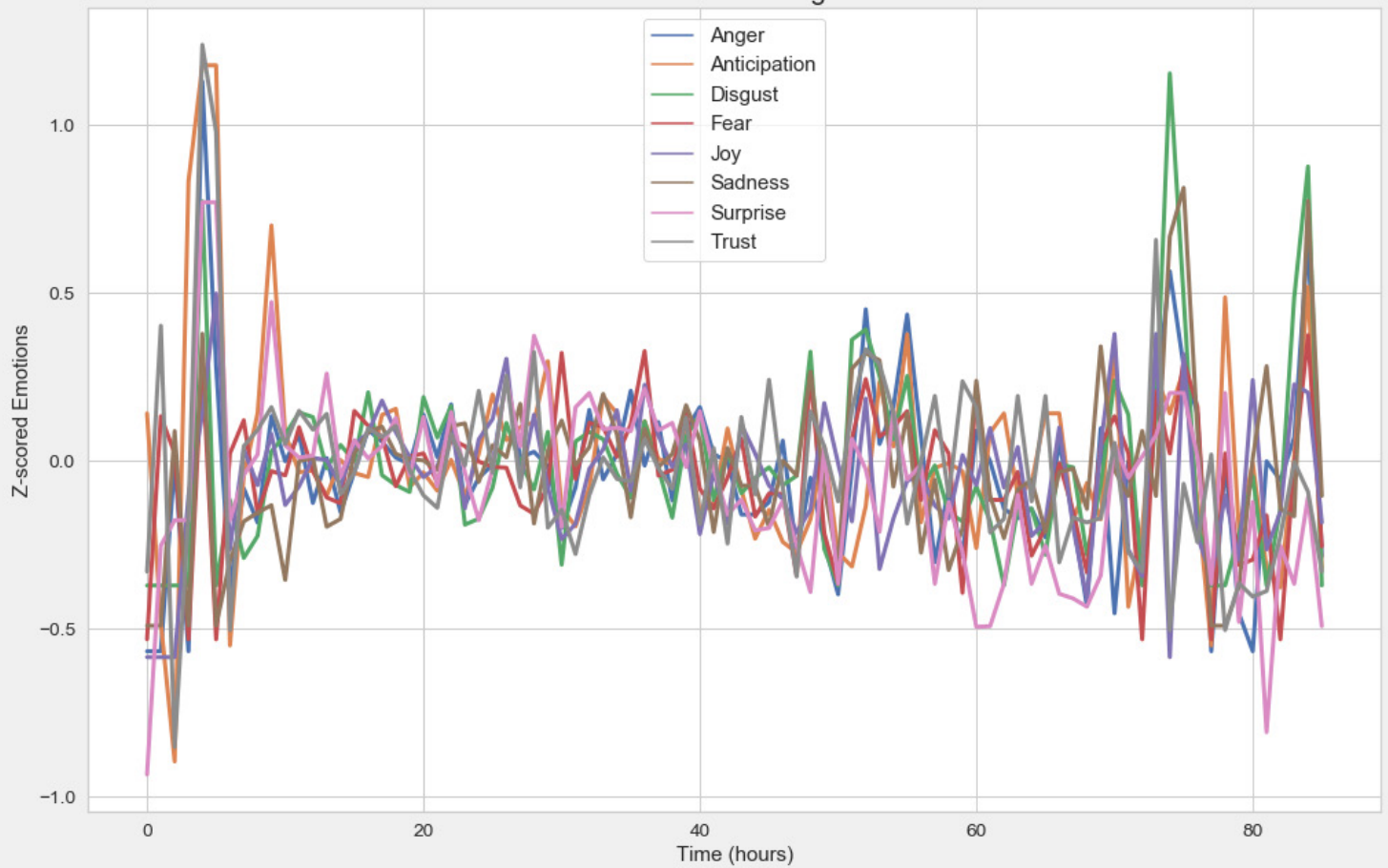


Top 10 words for each emotion

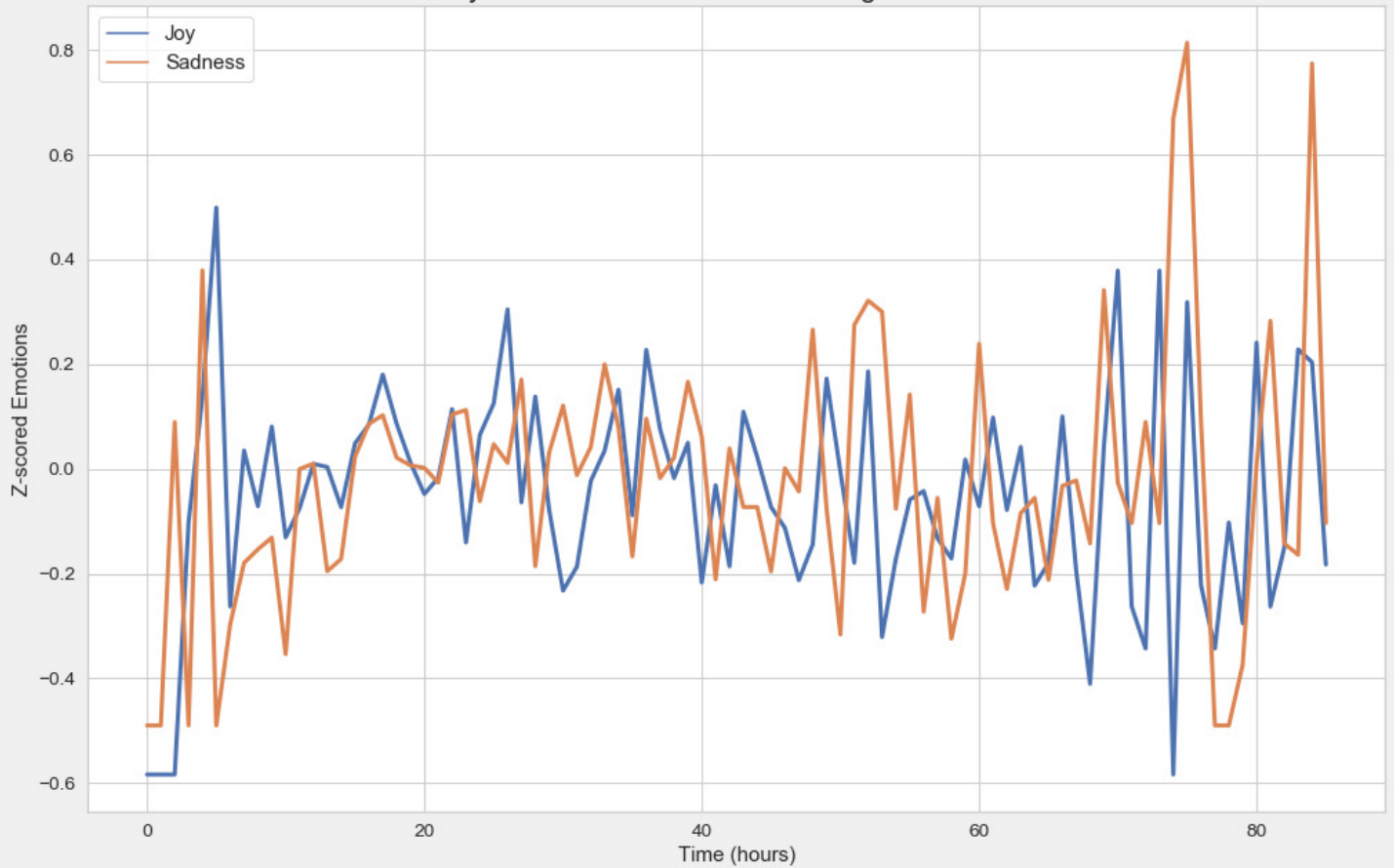




Emotions time series during online storm



Joy and Sadness time series during online storm



Plot for each emotion during online storm

