News Sentiment Analysis

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10 APR 2018

Presentation Overview

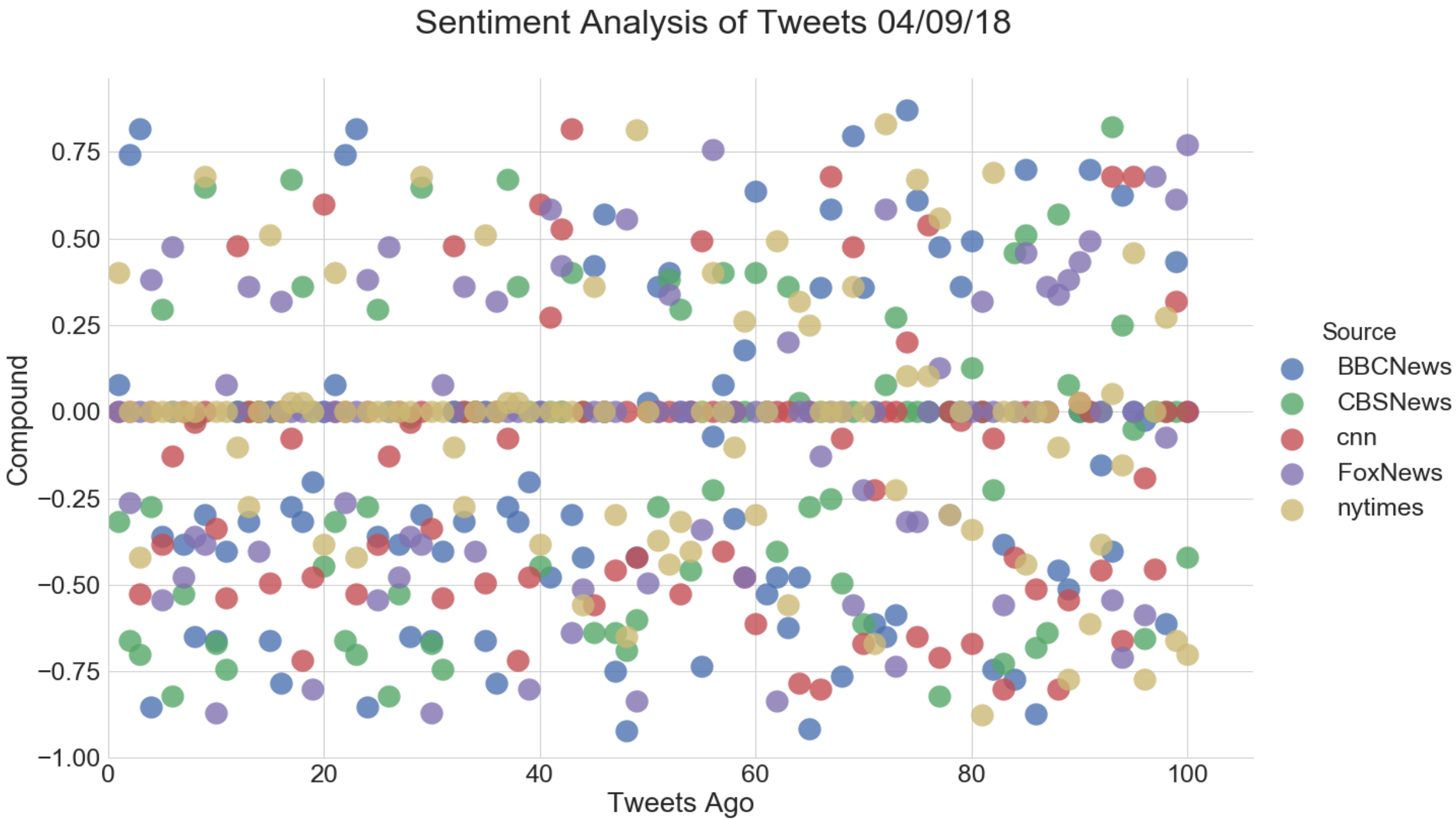
- Background
- Data Analysis
- Results
- Observations

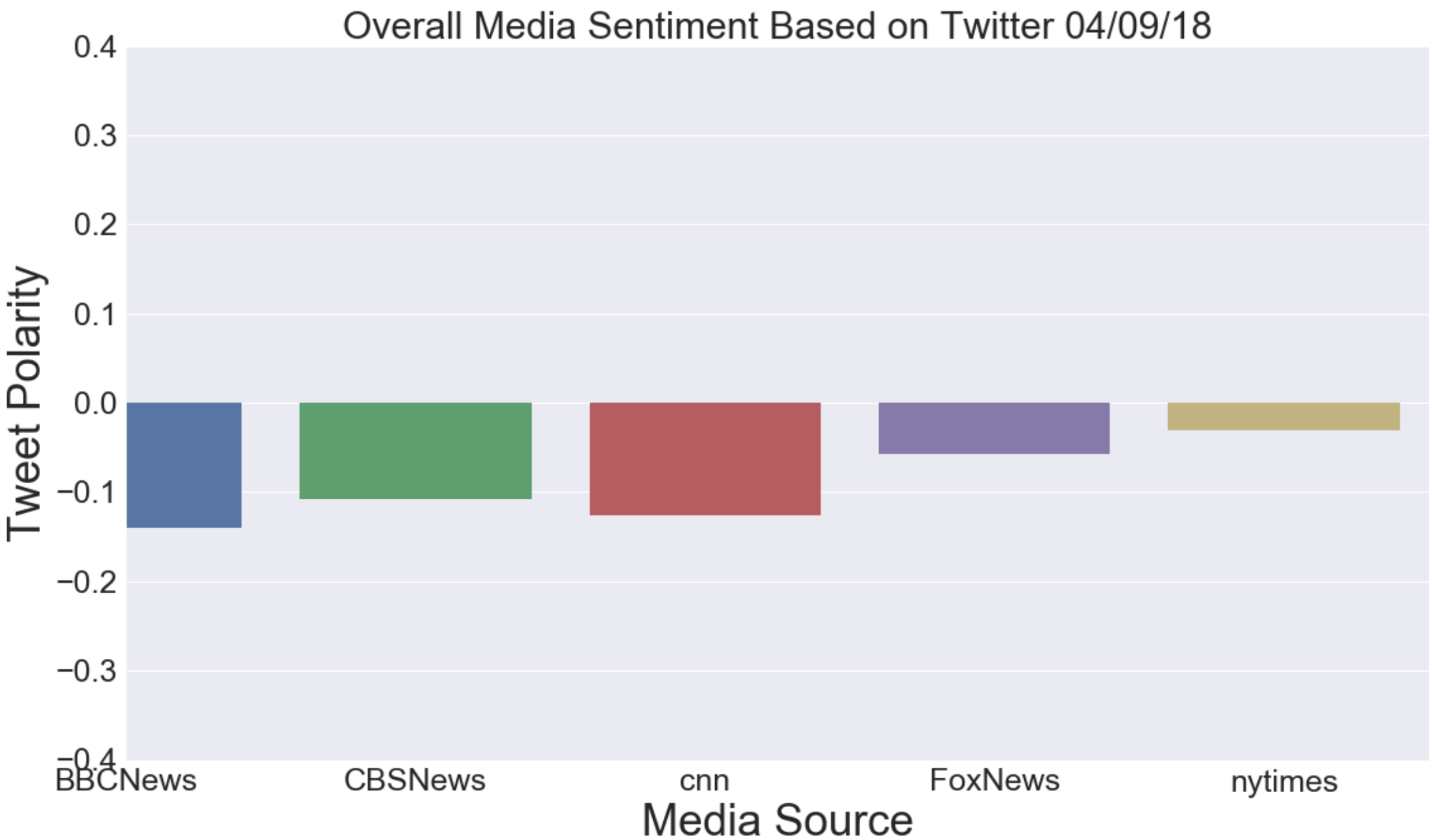
Background

- The purpose of this analysis is to identify the sentiment of the news reported on the tweets of 5 selected news organizations: BBC, CNN, NY Times, Fox News, and CBS News
- The analysis was performed on 9 APR 18 on 100 of the most recent tweets from the subject news organizations
- A sentiment analysis was performed using a software library called VADER (Valence Aware Dictionary and sEntiment Reasoner)
- VADER uses rules to analyze tweets to determine the sentiment of the tweet on a scale of -1.0 (negative sentiment) to 1.0 (positive sentiment) with 0 being neutral. From this analysis VADER computes a composite or aggregate score of the overall sentiment.
- The VADER composite score was used to determine tweet sentiment

Data Analysis Overview

- Approach:
  - Using the twitter API library called Tweepy, 100 of the most recent tweets were downloaded
  - VADER was used to score each tweet
  - A Panda DataFrame was used to process and plot the data
  - A CSV file was created to keep store the data
  - A scatterplot showing the composite sentiment score for the last 100 tweets of all 5 news organizations was generated
  - A bar graph that compares the median of the sentiment scores for each news organization was created
- Data Analysis Software Tools/Resources:
  - Python 3.6
  - Panda scientific computing library
  - Jupyter for visualization and code creation
  - Matplotlib and Seaborn visualization libraries
  - Tweepy library for interfacing to the Twitter API
  - VADER (Valence Aware Dictionary and sEntiment Reasoner)


Sentiment Analysis of Tweets 04/09/18
Compound
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
0
20
40
60
80
100
Tweets Ago
Source
BBCNews
CBSNews
cnn
FoxNews
nytimes


Overall Media Sentiment Based on Twitter 04/09/18
Tweet Polarity
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
−0.3
−0.4
BBCNews
CBSNews
cnn
FoxNews
nytimes
Media Source

Observations

- Trend 1: The 9 APR 18 scatter plot shows a concentration of tweets close to zero indicating most of the sentiment from the news organizations are in general close to neutral
- Trend 2: The 9 APR 18 median bar plot indicates a slightly negative sentiment for each news organizations
- Trend 3: Given that each news organization reports on the same major events and topics the direction of the sentiment is consistent. In this case slightly negative.