SENTIMENT ANALYSIS ON TWITTER DATA

BREXIT

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Case Study

- To create a sentiment analysis on Twitter data for BREXIT, using R tool, present it in any dashboard (e.g. Shiny). Use below mentioned resources to accomplish this case study.

- Inputs- Refer Hashtag #brexit.

Resources Required

- R

Programming language and software environment for statistical computing and graphics, useful in data mining and analytics

- Shiny

Web application framework for R that turns analyses into interactive web applications

- Twitter

Social networking site allowing hashtags (metadata tags) in tweets for trending topics; good source for data mining

Data Mining and Analysis

- Data Mining

  An analytical process designed to explore data in search of consistent patterns

- Data Analysis

  Statistical evaluation of data, either for sentiment analysis or for prediction

- This project used Data Mining and Analysis for extracting tweets from Twitter with #brexit, to analyze the sentiments by Twitterati on the withdrawal of United Kingdom from the European Union

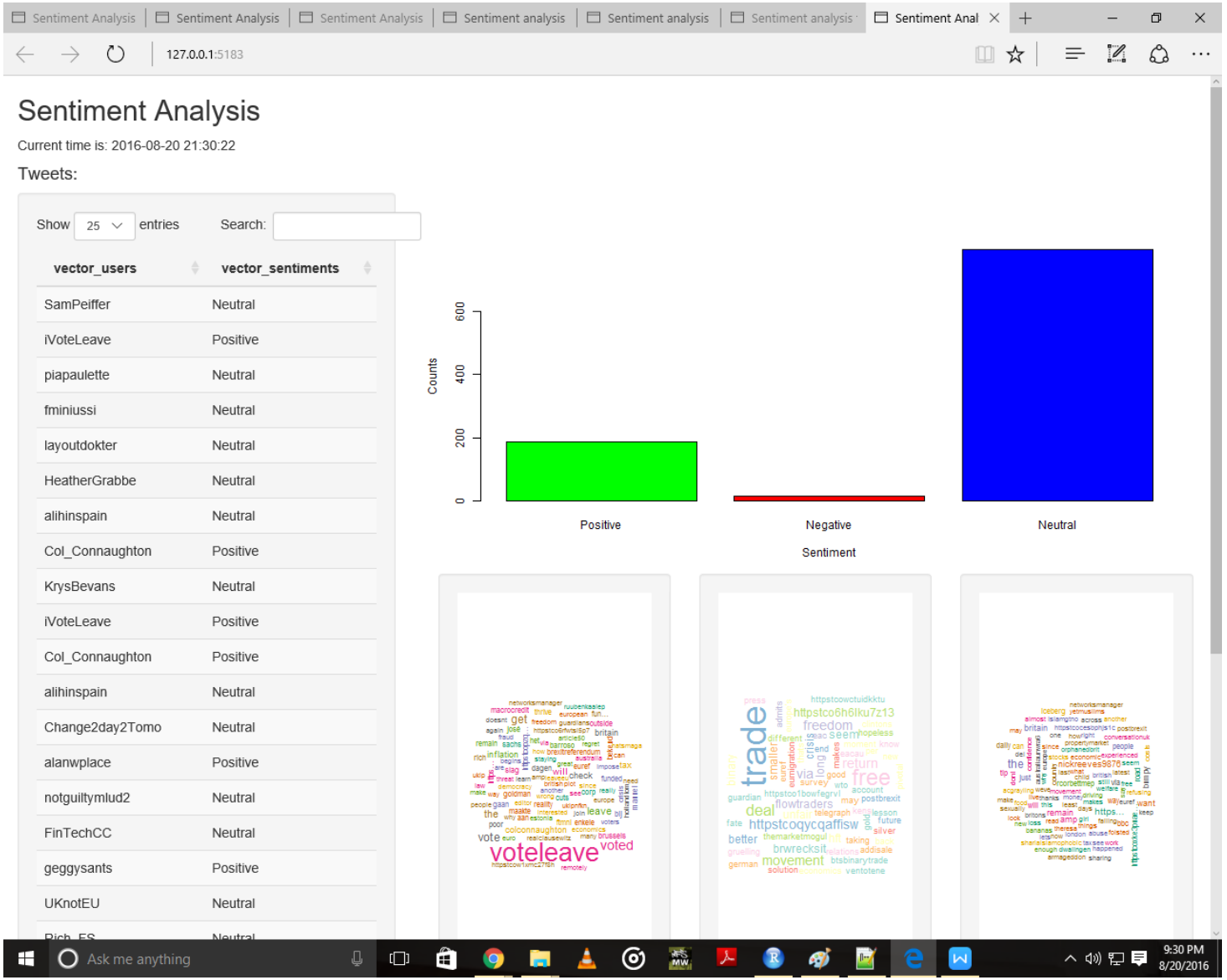
Sentiment Analysis

- Process of computationally identifying and categorizing opinions expressed in pieces of text secured from various sources
- Determines author's attitude towards the topic- positive, negative or neutral
- This project carries out a sentiment analysis on tweets with #brexit, to identify & categorize opinions of Twitterati worldwide on Brexit- the exit of UK from the EU

Approach

- Obtain permissions from Twitter via Twitter API
- Extract tweets with hashtag #brexit
- Using set of words as lexicons, perform sentimental analysis on data
- Displaying output on Shiny in the following formats:
  - Table: users and their sentiments
  - Graph: number of tweets and their sentiments
  - Word cloud: usage of words in the tweets

Dashboard


Sentiment Analysis
Sentiment Analysis
Sentiment Analysis
Sentiment analysis
Sentiment analysis
Sentiment analysis
Sentiment Anal
127.0.0.1:5183
Sentiment Analysis
Current time is: 2016-08-20 21:30:22
Tweets:
Show 25 entries
Search:
vector_users
vector_sentiments
SamPeiffer Neutral
iVoteLeave Positive
piapaulette Neutral
fminiussi Neutral
layoutdokter Neutral
HeatherGrabbe Neutral
alihinspain Neutral
Col_Connaughton Positive
KrysBevans Neutral
iVoteLeave Positive
Col_Connaughton Positive
alihinspain Neutral
Change2day2Tomo Neutral
alanwplace Positive
notguiltymlud2 Neutral
FinTechCC Neutral
geggysants Positive
UKnotEU Neutral
Counts
0
200
400
600
Positive
Negative
Neutral
Sentiment
voteleave
voted
trade
freedom
free
deal
Ask me anything
9:30 PM
8/20/2016

Output

- Tweet analysis

Table on the left lists Twitter users and their sentiments on Brexit

- Graphical representation

The graph displays the number of tweets for each category of sentiment: positive, negative, neutral

- Wordcloud

The prominent words for each sentiment are depicted as wordclouds below the colored bars for each sentiment in the graph

Analysis

The extracted tweets are categorized into 3 groups, on the basis of sentiments:

- Positive (Green bar)

Tweets with words that matched words in the lexicon for positive sentiments

- Negative (Red bar)

Tweets with words that matched words in the lexicon for negative sentiments

- Neutral (Blue bar)

Tweets which convey neither positive nor negative sentiments

Conclusion

- The sentiment analysis of Twitter data for BREXIT was displayed pictorially

- The analysis of tweets with #brexit led to the following conclusions:

- Majority of the tweets were neutral
- A major chunk of the remaining tweets demonstrated positive sentiments
- Very few displayed negative sentiments on Brexit