

```
import tweepy
from textblob import TextBlob
from wordcloud import WordCloud
import pandas as pd
import numpy as np
import re
import matplotlib.pyplot as plt
plt.style.use('fivethirtyeight')
```

```
Consumer_Key = "k9bNeS6dLOQDZDz5UVKKMTKRE"
Consumer_Secret_Key = "2otrjcqFJrxBAHe98cdVUJs6IhGvaQ5AUPDHf5ANaTBRB7gVQF"
Access_Token = "711793825774235648-Y9DltrhTJriyWxGDAIU8X1BLF4mdLcx"
Access_Token_Secret = "uPxRbRxNL70v2dShh9jDwnCSg2CdiNy3NXEhvO2Xy8Uti"
```

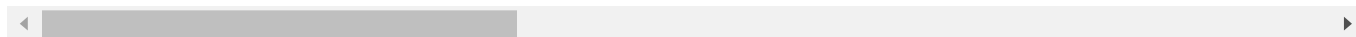
```
auth = tweepy.OAuthHandler(Consumer_Key, Consumer_Secret_Key)
auth.set_access_token(Access_Token, Access_Token_Secret)
api = tweepy.API(auth)
```

```
posts = api.user_timeline(screen_name="realDonaldTrump", count = 100, lang = "en", tweet_mode=
```

```
# Print the last 5 tweets
print("Show the 5 recent tweets:\n")
i=1
for tweet in posts[:5]:
    print(str(i) + ') ' + tweet.full_text + '\n')
    i= i+1
```

☞ Show the 5 recent tweets:

- 1) <https://t.co/hab5WLhtrI>
- 2) Morocco recognized the United States in 1777. It is thus fitting we recognize their
- 3) Another HISTORIC breakthrough today! Our two GREAT friends Israel and the Kingdom of
- 4) Today, I signed a proclamation recognizing Moroccan sovereignty over the Western Sahara
- 5) RT @Lancegooden: Eric Swalwell spent 4 years targeting and harassing @realDonaldTrump



```
df = pd.DataFrame([tweet.full_text for tweet in posts], columns=['Tweets'])
# Show the first 5 rows of data
df.head()
```

Tweets

	Tweets
0	https://t.co/hab5WLhtrl
1	Morocco recognized the United States in 1777. ...
2	Another HISTORIC breakthrough today! Our two G...
3	Today, I signed a proclamation recognizing Mor...

```
def cleanTxt(text):
    text = re.sub('@[A-Za-z0-9]+', '', text) #Removing @mentions
    text = re.sub('#', '', text) # Removing '#' hash tag
    text = re.sub('RT[\s]+', '', text) # Removing RT
    text = re.sub('https?:\/\/\S+', '', text) # Removing hyperlink

    return text
```

```
# Clean the tweets
df['Tweets'] = df['Tweets'].apply(cleanTxt)

# Show the cleaned tweets
df
```

Tweets

	Tweets
0	
1	Morocco recognized the United States in 1777. ...
2	Another HISTORIC breakthrough today! Our two G...
3	Today, I signed a proclamation recognizing Mor...
4	: Eric Swalwell spent 4 years targeting and ha...
...	...
95	1776: BREAKING: 1 "There is no telling how man...
96	So much truth to this!
97	: Will you pray with me tonight for Rudy Ameri...
98	: The Cross Hall & Grand Foyer overflow w...
99	: Lighting the National Christmas Tree is one ...

100 rows × 1 columns

```
# Create a function to get the subjectivity
def getSubjectivity(text):
    return TextBlob(text).sentiment.subjectivity
```

```
# Create a function to get the polarity
```

```
def getPolarity(text):
    return TextBlob(text).sentiment.polarity

# Create two new columns 'Subjectivity' & 'Polarity'
df['Subjectivity'] = df['Tweets'].apply(getSubjectivity)
df['Polarity'] = df['Tweets'].apply(getPolarity)

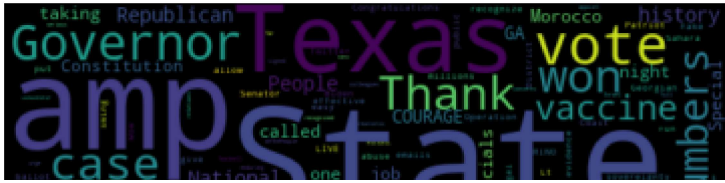
# Show the new dataframe with columns 'Subjectivity' & 'Polarity'
df
```

	Tweets	Subjectivity	Polarity
0		0.00	0.000000
1	Morocco recognized the United States in 1777. ...	0.25	0.250000
2	Another HISTORIC breakthrough today! Our two G...	0.46	0.230000
3	Today, I signed a proclamation recognizing Mor...	0.45	0.038889
4	: Eric Swalwell spent 4 years targeting and ha...	0.30	0.200000
...
95	1776: BREAKING: 1 "There is no telling how man...	0.50	0.500000
96	So much truth to this!	0.20	0.250000
97	: Will you pray with me tonight for Rudy Ameri...	0.00	0.000000
98	: The Cross Hall & Grand Foyer overflow w...	0.55	0.450000
99	: Lighting the National Christmas Tree is one ...	0.00	0.000000

100 rows × 3 columns

```
# word cloud visualization
allWords = ' '.join([twts for twts in df['Tweets']])
wordCloud = WordCloud(width=500, height=300, random_state=21, max_font_size=110).generate(all

plt.imshow(wordCloud, interpolation="bilinear")
plt.axis('off')
plt.show()
```



```
# Create a function to compute negative (-1), neutral (0) and positive (+1) analysis
def getAnalysis(score):
```

```
    if score < 0:
        return 'Negative'
    elif score == 0:
        return 'Neutral'
    else:
        return 'Positive'
df['Analysis'] = df['Polarity'].apply(getAnalysis)
# Show the dataframe
df
```

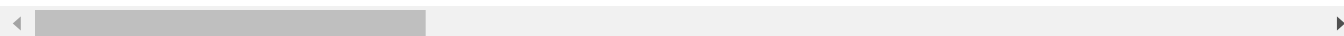
	Tweets	Subjectivity	Polarity	Analysis
0		0.00	0.000000	Neutral
1	Morocco recognized the United States in 1777. ...	0.25	0.250000	Positive
2	Another HISTORIC breakthrough today! Our two G...	0.46	0.230000	Positive
3	Today, I signed a proclamation recognizing Mor...	0.45	0.038889	Positive
4	: Eric Swalwell spent 4 years targeting and ha...	0.30	0.200000	Positive
...
95	1776: BREAKING: 1 "There is no telling how man...	0.50	0.500000	Positive
96	So much truth to this!	0.20	0.250000	Positive
97	: Will you pray with me tonight for Rudy Ameri...	0.00	0.000000	Neutral
98	: The Cross Hall & Grand Foyer overflow w...	0.55	0.450000	Positive
99	: Lighting the National Christmas Tree is one ...	0.00	0.000000	Neutral

100 rows × 4 columns

```
print('Printing negative tweets:\n')
j=1
sortedDF = df.sort_values(by=['Polarity'],ascending=False) #Sort the tweets
for i in range(0, sortedDF.shape[0] ):
    if( sortedDF['Analysis'][i] == 'Negative'):
        print(str(j) + ' ') '+sortedDF['Tweets'][i])
        print()
        j=j+1
```

Printing negative tweets:

- 1)The fact that our Country is being stolen. A coup is taking place in front of our
- 2) "People are upset, and they have a right to be. Georgia not only supported Trump in 2
- 3) This case had nothing to do with me. Fake News (as usual!).
- 4) : Before Operation Warp Speed, the typical timeline for vaccine development and appro
- 5) They got caught because we were leading by so much more than they ever thought possib
- 6) : You don't mess with Texas!
- 7) Or worse!
- 8) I hope House Republicans will vote against the very weak National Defense Authorizati
- 9) Georgia Lt. Governor is a RINO Never Trumper who got himself elected as LG by falsel
- 10) Mail-In rejection rate was minuscule compared to what it used to be. Ken Starr Mear
- 11) Now spreading Fake News!



```
print('Printing Positive tweets:\n')
j=1
sortedDF = df.sort_values(by=['Polarity'],ascending=True) #Sort the tweets
for i in range(0, sortedDF.shape[0] ):
    if( sortedDF['Analysis'][i] == 'Positive'):
        print(str(j) + ' ') '+sortedDF['Tweets'][i])
        print()
        j=j+1
```

Printing Positive tweets:

- 1) Morocco recognized the United States in 1777. It is thus fitting we recognize the
- 2) Another HISTORIC breakthrough today! Our two GREAT friends Israel and the Kingdom o
- 3) Today, I signed a proclamation recognizing Moroccan sovereignty over the Western S
- 4) : Eric Swalwell spent 4 years targeting and harassing , , and many others in the P
- 5) : The DOJ needs to listen to WeThePeople and address their election concerns NOW.
- Glad to join and more than t...
- 6) : Joined and 25 of our colleagues to urge Attorney General Barr to appoint a Spec
- 7) Great. Most corrupt Election in history, by far. We won!!!
- 8) : Everybody's got their own OPINIONS about election fraud.

I'm not interested in opinions. I want FACTS.

9) How can you give an election to someone who lost the election by hundreds of thous

10) The Supreme Court has a chance to save our Country from the greatest Election abu

11) Wow! At least 17 States have joined Texas in the extraordinary case against the g

12) At 10:00 P.M. on Election Evening, we were at 97% win with the so-called "bookies"

13) We will soon be learning about the word "courage", and saving our Country. I rece

14) STOCK MARKETS AT NEW ALL TIME HIGHS!!!

15) Germany has consistently been used by my obnoxious critics as the country that we

16) We will be INTERVENING in the Texas (plus many other states) case. This is the bi

17) This was not my case as has been so incorrectly reported. The case that everyone

18) : Every waking moment is about one purpose: saving American lives by delivering s

19) : "If authorized, tens of millions of vaccine doses will be available this month

20) : "From the instant the Coronavirus invaded our shores, we raced into action to d

21) : LIVE: Operation Warp Speed Vaccine Summit

22) Thank you and congratulations to General Flynn. He and his incredible family have

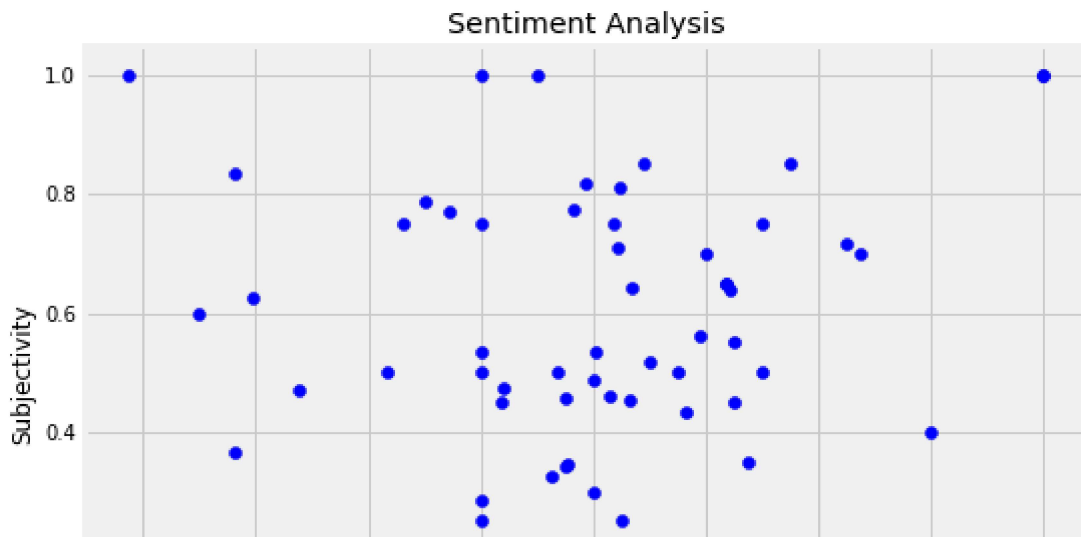
23) 504twit: Every Republican PAC from every State should organize to do the exact sa

🇺🇸 Us From Coast to Coast...

24) : 🇺🇸 Excellent news. "Texas Sues Georgia, Michigan, Pennsylvania, and Wisconsin a

25) . and puppet . Your poll numbers are tanking like seldom seen before. Always said

```
plt.figure(figsize=(8,6))
for i in range(0, df.shape[0]):
    plt.scatter(df["Polarity"][i], df["Subjectivity"][i], color='Blue')
# plt.scatter(x,y,color)
plt.title('Sentiment Analysis')
plt.xlabel('Polarity')
plt.ylabel('Subjectivity')
plt.show()
```



```
ptweets = df[df.Analysis == 'Positive']
ptweets = ptweets['Tweets']
ptweets

round( (ptweets.shape[0] / df.shape[0]) * 100 , 1)

44.0
```

```
ntweets = df[df.Analysis == 'Negative']
ntweets = ntweets['Tweets']
ntweets

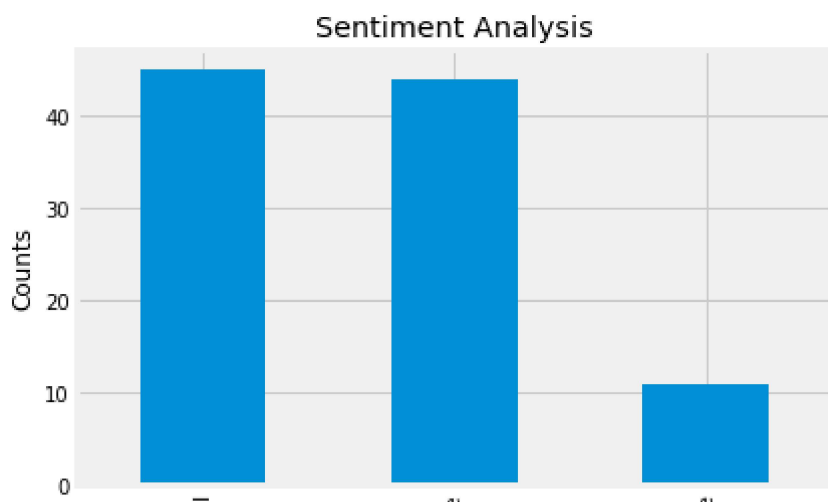
round( (ntweets.shape[0] / df.shape[0]) * 100, 1)

11.0
```

```
# Show the value counts
df['Analysis'].value_counts()

Neutral      45
Positive     44
Negative     11
Name: Analysis, dtype: int64
```

```
plt.title('Sentiment Analysis')
plt.xlabel('Sentiment')
plt.ylabel('Counts')
df['Analysis'].value_counts().plot(kind = 'bar')
plt.show()
```



```
plt.title('Sentiment Analysis')  
plt.xlabel('Sentiment')  
plt.ylabel('Counts')  
df['Analysis'].value_counts().plot(kind = 'line')  
plt.show()
```

