

Tweepy: tweepy is the python client for the official Twitter API.

```
pip install tweepy
```

```

[>] Requirement already satisfied: tweepy in /usr/local/lib/python3.6/dist-packages (3.6.
Requirement already satisfied: PySocks>=1.5.7 in /usr/local/lib/python3.6/dist-packag
Requirement already satisfied: requests-oauthlib>=0.7.0 in /usr/local/lib/python3.6/d
Requirement already satisfied: requests>=2.11.1 in /usr/local/lib/python3.6/dist-pack
Requirement already satisfied: six>=1.10.0 in /usr/local/lib/python3.6/dist-packages
Requirement already satisfied: oauthlib>=3.0.0 in /usr/local/lib/python3.6/dist-packa
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.6/dist-pa
Requirement already satisfied: idna<2.9,>=2.5 in /usr/local/lib/python3.6/dist-packag
Requirement already satisfied: chardet<3.1.0,>=3.0.2 in /usr/local/lib/python3.6/dist
Requirement already satisfied: urllib3<1.25,>=1.21.1 in /usr/local/lib/python3.6/dist

```

TextBlob: textblob is the python library for processing textual data.

```
from textblob import TextBlob
```

```
[>] ERROR! Session/line number was not unique in database. History logging moved to new s
```

```

import re
import tweepy
from tweepy import OAuthHandler
from textblob import TextBlob

class TwitterClient(object):
    """
    Generic Twitter Class for sentiment analysis.
    """
    def __init__(self):
        """
        Class constructor or initialization method.
        """
        # keys and tokens from the Twitter Dev Console
        consumer_key = 'yDlvVPn2TwAGUJ7QaJWS1i3Rr'
        consumer_secret = 'XAuGWmuBA4KZpgaSEGunjbhoqC4WIdWQoIFwACjImG2CBm3g4j'
        access_token = '4700090913-9SZmzyrPTHuDtd2nx0e2XDxxovXmIhSnSfvJp0H'
        access_token_secret = 'rLRBDppdxbkXHO3Pjeoso3JS70M0BTZuNb5V3T6AM0ge4'

        # attempt authentication
        try:
            # create OAuthHandler object
            self.auth = OAuthHandler(consumer_key, consumer_secret)
            # set access token and secret
            self.auth.set_access_token(access_token, access_token_secret)
            # create tweepy API object to fetch tweets
            self.api = tweepy.API(self.auth)
        except:
            print("Error: Authentication Failed")

    def clean_tweet(self, tweet):

```

```

... .._, .._, ..
'''

Utility function to clean tweet text by removing links, special characters
using simple regex statements.
'''

return ' '.join(re.sub("(@[A-Za-z0-9]+)|([^0-9A-Za-z \t])|(\w+:\/\/\S+)", " ", twe

def get_tweet_sentiment(self, tweet):
'''
Utility function to classify sentiment of passed tweet
using textblob's sentiment method
'''

# create TextBlob object of passed tweet text
analysis = TextBlob(self.clean_tweet(tweet))
# set sentiment
if analysis.sentiment.polarity > 0:
    return 'positive'
elif analysis.sentiment.polarity == 0:
    return 'neutral'
else:
    return 'negative'

def get_tweets(self, query, count = 10):
'''
Main function to fetch tweets and parse them.
'''

# empty list to store parsed tweets
tweets = []

try:
    # call twitter api to fetch tweets
    fetched_tweets = self.api.search(q = query, count = count)

    # parsing tweets one by one
    for tweet in fetched_tweets:
        # empty dictionary to store required params of a tweet
        parsed_tweet = {}

        # saving text of tweet
        parsed_tweet['text'] = tweet.text
        # saving sentiment of tweet
        parsed_tweet['sentiment'] = self.get_tweet_sentiment(tweet.text)

        # appending parsed tweet to tweets list
        if tweet.retweet_count > 0:
            # if tweet has retweets, ensure that it is appended only once
            if parsed_tweet not in tweets:
                tweets.append(parsed_tweet)
        else:
            tweets.append(parsed_tweet)

    # return parsed tweets
    return tweets

except tweepy.TweepError as e:
    # print error (if any)

```

```
print("Error : " + str(e))

def main():
    # creating object of TwitterClient Class
    api = TwitterClient()
    # calling function to get tweets
    tweets = api.get_tweets(query = 'Corona Virus', count = 200)

    # picking positive tweets from tweets
    ptweets = [tweet for tweet in tweets if tweet['sentiment'] == 'positive']
    # percentage of positive tweets
    print("Positive tweets percentage: {} {}".format(100*len(ptweets)/len(tweets)))
    # picking negative tweets from tweets
    ntweets = [tweet for tweet in tweets if tweet['sentiment'] == 'negative']
    # percentage of negative tweets
    print("Negative tweets percentage: {} {}".format(100*len(ntweets)/len(tweets)))
    # percentage of neutral tweets
    print("Neutral tweets percentage: {} {}".format(100*(len(tweets) - len(ntweets) - len(p

    # printing first 5 positive tweets
    print("\n\nPositive tweets:")
    for tweet in ptweets[:10]:
        print(tweet['text'])

    # printing first 5 negative tweets
    print("\n\nNegative tweets:")
    for tweet in ntweets[:10]:
        print(tweet['text'])

if __name__ == "__main__":
    # calling main function
    main()
```



Positive tweets percentage: 20.0 %  
 Negative tweets percentage: 12.22222222222221 %  
 Neutral tweets percentage: 67.77777777777777 %

#### Positive tweets:

Despite the insinuations, speculations and suggestions about the causes of corona vir  
 RT @asumsico: Seekor harimau Malaya (Panthera tigris tigris) berusia 4 tahun bernama  
 RT @ImAllexx: apparently a corona virus symptom is having no taste, thoughts go out t  
 RT @RajGovOfficial: For useful information regarding Corona virus (COVID-19), the gov  
 RT @Immanuel\_Appiah: We will not lose a loved one to corona virus or anything else is  
 RT @joybhattacharj: A mithai shop in Kolkata decides that the Coronavirus is a great  
 First the slightly crazed lady...  
 @GlennKesslerWP oh Glenn -- get over yourself - That statement was true before the Co  
 Corona Virus Live Tracker <https://t.co/2tXpxKGde3>  
 RT @khalillone0786: " AT THE REQUEST OF THE GERMAN PEOPLE IN BERLIN BECAUSE OF THE  
 FOR THE FIRST TIME IN GERMAN...  
 RT @Sanginamby: It's comical to see how they justify lighting the candle/diya/torch.

#### Negative tweets:

RT @LeonardRoxon: What could go wrong with this scenario, especially after the Corona  
 As long as the Trudeau Liberals are maki...  
 @tl\_khumalo\_ @HermaineM In fact women should not worry about corona virus cause they  
 RT @carolinehills2: #5GTOWERS - if you think the burning of these masts is crazy sugg  
 RT @raj2jas: Chinese corona virus. Global secret agencies investigating origin of vir  
 @IndiGo6E  
 We have booked this ticket through MMT app PNR is WKID5T We need to attend a marriag  
 RT @EmekaGift: We have gotten reliable information that some member of #AsoRock have  
 RT @chibyke\_don: Nigeria currently doesn't have a president or vice PRESIDENT, the vi  
 @realmadrid  
 Our hearts go out to every human being who suffers because of Corona Virus ... Spain  
 RT @itsmakel: @imjassya @1RealMir my granny died yesterday mornin. she had less than  
 RT @AftabSherpao: How can the Quetta administration at this crucial time baton charge