

TWITTER SENTIMENT ANALYSIS

This takes trends place, trend name, no. Of tweets to be analysed and outputs the average polarity* of the tweets on a scale of -1 to +1, and subjectivity** of the average polarity calculated on a scale of 0 to 1.

*=polarity tells you how positive or negative a tweet is (in our case)

**=subjectivity tells us whether a statement is subjective (with respect to a person effected by his / her emotions, situations)or objective (factual or not effected by a single person)

LIBRARIES USED :

1)tweepy : for accesing twitters API

find the docs here : <http://docs.tweepy.org/en/v3.5.0/>

2)textblob : for text sentiment analysis

find the docs here : <https://textblob.readthedocs.io/en/dev/>

3)re : for text manupulations

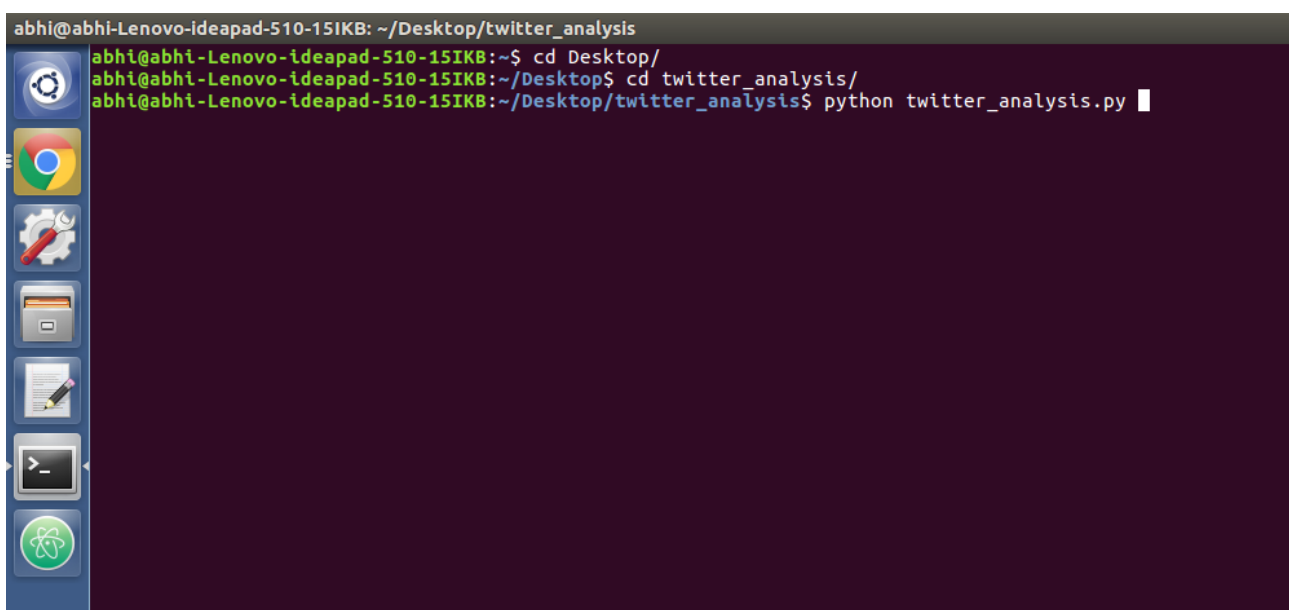
find the docs here : <https://docs.python.org/2/library/re.html>

HOW IT WORKS / HOW TO USE THIS

STEP-1 : RUNNING THIS CODE

navigate to the folder where you saved this file , run the following command to run this file

python twitter_analysis.py

A screenshot of a Linux terminal window. The title bar shows the user 'abhi' on a machine named 'abhi-Lenovo-ideapad-510-15IKB' at the directory '~/Desktop/twitter_analysis'. The terminal shows a series of commands: 'cd Desktop/' followed by 'cd twitter_analysis/' and finally 'python twitter_analysis.py'. The output of the script is not visible in the screenshot. The terminal has a dark background with a light-colored cursor at the end of the last command.

```
abhi@abhi-Lenovo-ideapad-510-15IKB: ~/Desktop/twitter_analysis
abhi@abhi-Lenovo-ideapad-510-15IKB:~$ cd Desktop/
abhi@abhi-Lenovo-ideapad-510-15IKB:~/Desktop$ cd twitter_analysis/
abhi@abhi-Lenovo-ideapad-510-15IKB:~/Desktop/twitter_analysis$ python twitter_analysis.py
```

STEP-2:

Terminal shows u a JSON string (sent by twitters servers as a response).each row has name of the place, country code and weo code for that place , copy this code an paste it (i.e, input this code)

```
abhi@abhi-Lenovo-ideapad-510-15IKB: ~/Desktop/twitter_analysis
{
  (u'name': u'Netherlands', u'countryCode': u'NL', u'url': u'http://where.yahooapis.com/v1/place/23424989', u'country': u'Netherlands', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424989),
  (u'name': u'Norway', u'countryCode': u'NO', u'url': u'http://where.yahooapis.com/v1/place/23424910', u'country': u'Norway', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424910),
  (u'name': u'New Zealand', u'countryCode': u'NZ', u'url': u'http://where.yahooapis.com/v1/place/23424916', u'country': u'New Zealand', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424916),
  (u'name': u'Peru', u'countryCode': u'PE', u'url': u'http://where.yahooapis.com/v1/place/23424919', u'country': u'Peru', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424919),
  (u'name': u'Pakistan', u'countryCode': u'PK', u'url': u'http://where.yahooapis.com/v1/place/23424922', u'country': u'Pakistan', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424922),
  (u'name': u'Poland', u'countryCode': u'PL', u'url': u'http://where.yahooapis.com/v1/place/23424923', u'country': u'Poland', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424923),
  (u'name': u'Panama', u'countryCode': u'PA', u'url': u'http://where.yahooapis.com/v1/place/23424924', u'country': u'Panama', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424924),
  (u'name': u'Portugal', u'countryCode': u'PT', u'url': u'http://where.yahooapis.com/v1/place/23424925', u'country': u'Portugal', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424925),
  (u'name': u'Qatar', u'countryCode': u'QA', u'url': u'http://where.yahooapis.com/v1/place/23424930', u'country': u'Qatar', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424930),
  (u'name': u'Philippines', u'countryCode': u'PH', u'url': u'http://where.yahooapis.com/v1/place/23424934', u'country': u'Philippines', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424934),
  (u'name': u'Puerto Rico', u'countryCode': u'PR', u'url': u'http://where.yahooapis.com/v1/place/23424935', u'country': u'Puerto Rico', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424935),
  (u'name': u'Russia', u'countryCode': u'RU', u'url': u'http://where.yahooapis.com/v1/place/23424936', u'country': u'Russia', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424936),
  (u'name': u'Saudi Arabia', u'countryCode': u'SA', u'url': u'http://where.yahooapis.com/v1/place/23424938', u'country': u'Saudi Arabia', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424938),
  (u'name': u'South Africa', u'countryCode': u'ZA', u'url': u'http://where.yahooapis.com/v1/place/23424942', u'country': u'South Africa', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424942),
  (u'name': u'Singapore', u'countryCode': u'SG', u'url': u'http://where.yahooapis.com/v1/place/23424948', u'country': u'Singapore', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424948),
  (u'name': u'Spain', u'countryCode': u'ES', u'url': u'http://where.yahooapis.com/v1/place/23424950', u'country': u'Spain', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424950),
  (u'name': u'Sweden', u'countryCode': u'SE', u'url': u'http://where.yahooapis.com/v1/place/23424954', u'country': u'Sweden', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424954),
  (u'name': u'Switzerland', u'countryCode': u'CH', u'url': u'http://where.yahooapis.com/v1/place/23424957', u'country': u'Switzerland', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424957),
  (u'name': u'Thailand', u'countryCode': u'TH', u'url': u'http://where.yahooapis.com/v1/place/23424960', u'country': u'Thailand', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424960),
  (u'name': u'Turkey', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/23424969', u'country': u'Turkey', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424969),
  (u'name': u'United Kingdom', u'countryCode': u'GB', u'url': u'http://where.yahooapis.com/v1/place/23424975', u'country': u'United Kingdom', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424975),
  (u'name': u'Ukraine', u'countryCode': u'UA', u'url': u'http://where.yahooapis.com/v1/place/23424976', u'country': u'Ukraine', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424976),
  (u'name': u'United States', u'countryCode': u'US', u'url': u'http://where.yahooapis.com/v1/place/23424977', u'country': u'United States', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424977),
  (u'name': u'Venezuela', u'countryCode': u'VE', u'url': u'http://where.yahooapis.com/v1/place/23424982', u'country': u'Venezuela', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424982),
  (u'name': u'Vietnam', u'countryCode': u'VN', u'url': u'http://where.yahooapis.com/v1/place/23424984', u'country': u'Vietnam', u'parentid': 1, u'placeType': {u'code': 12, u'name': u'Country'}, u'woeld': 23424984),
  (u'name': u'Petaling', u'countryCode': u'MY', u'url': u'http://where.yahooapis.com/v1/place/56013632', u'country': u'Malaysia', u'parentid': 23424981, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 56013632),
  (u'name': u'Lu Langat', u'countryCode': u'MY', u'url': u'http://where.yahooapis.com/v1/place/56013645', u'country': u'Malaysia', u'parentid': 23424901, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 56013645),
  (u'name': u'Ahsa', u'countryCode': u'SA', u'url': u'http://where.yahooapis.com/v1/place/56120136', u'country': u'Saudi Arabia', u'parentid': 23424938, u'placeType': {u'code': 9, u'name': u'Unknown'}, u'woeld': 56120136),
  (u'name': u'Okayama', u'countryCode': u'JP', u'url': u'http://where.yahooapis.com/v1/place/90036018', u'country': u'Japan', u'parentid': 23424856, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 90036018)
}

go through the above json string, find your place name and geotid of that place
enter the geotid of the place at which you want to get top twitter trends
```

***modification in the future / idea for interested programmers**

Save the json string as csv/json file , read the file , ask a place name for input and get the weocode from the saved file instead of asking the user to search for the weo code from the json string.

How it looks:

```
{
  (u'name': u'Thane', u'countryCode': u'IN', u'url': u'http://where.yahooapis.com/v1/place/2295410', u'country': u'India', u'parentid': 23424848, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2295410),
  (u'name': u'Mumbai', u'countryCode': u'IN', u'url': u'http://where.yahooapis.com/v1/place/2295411', u'country': u'India', u'parentid': 23424848, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2295411),
  (u'name': u'Pune', u'countryCode': u'IN', u'url': u'http://where.yahooapis.com/v1/place/2295412', u'country': u'India', u'parentid': 23424848, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2295412),
  (u'name': u'Hyderabad', u'countryCode': u'IN', u'url': u'http://where.yahooapis.com/v1/place/2295414', u'country': u'India', u'parentid': 23424848, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2295414),
  (u'name': u'Bangalore', u'countryCode': u'IN', u'url': u'http://where.yahooapis.com/v1/place/2295420', u'country': u'India', u'parentid': 23424848, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2295420),
  (u'name': u'Chennai', u'countryCode': u'IN', u'url': u'http://where.yahooapis.com/v1/place/2295424', u'country': u'India', u'parentid': 23424848, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2295424),
  (u'name': u'Mersin', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2323778', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2323778),
  (u'name': u'Adana', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2343678', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2343678),
  (u'name': u'Ankara', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2343732', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2343732),
  (u'name': u'Antalya', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2343733', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2343733),
  (u'name': u'Bursa', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2343843', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2343843),
  (u'name': u'Diyarbakir', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2343932', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2343932),
  (u'name': u'Eskişehir', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2343980', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2343980),
  (u'name': u'Gaziantep', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2343999', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2343999),
  (u'name': u'Istanbul', u'countryCode': u'TR', u'url': u'http://where.yahooapis.com/v1/place/2344116', u'country': u'Turkey', u'parentid': 23424969, u'placeType': {u'code': 7, u'name': u'Town'}, u'woeld': 2344116)
}
```

place name :

```
{u'name': u'Thane', u'countryCode': u'IN', u'url':  
410}  
{u'name': u'Mumbai', u'countryCode': u'IN', u'url':  
5411}  
{u'name': u'Pune', u'countryCode': u'IN', u'url':  
12}  
{u'name': u'Hyderabad', u'countryCode': u'IN', u'url':  
2295414}  
{u'name': u'Bangalore', u'countryCode': u'IN', u'url':  
2295420}  
{u'name': u'Chennai', u'countryCode': u'IN', u'url':  
95424}  
{u'name': u'Mersin', u'countryCode': u'TR', u'url':  
23778}  
{u'name': u'Adana', u'countryCode': u'TR', u'url':  
3678}  
{u'name': u'Ankara', u'countryCode': u'TR', u'url':  
43732}  
{u'name': u'Antalya', u'countryCode': u'TR', u'url':  
343733}  
{u'name': u'Bussan', u'countryCode': u'TR', u'url':  
343733}
```

weoid :

```
{u'name': u'Bhopal', u'countryCode': u'IN', u'url':  
5407}  
{u'name': u'Indore', u'countryCode': u'IN', u'url':  
5408}  
{u'name': u'Thane', u'countryCode': u'IN', u'url':  
410}  
{u'name': u'Mumbai', u'countryCode': u'IN', u'url':  
5411}  
{u'name': u'Pune', u'countryCode': u'IN', u'url':  
12}  
{u'name': u'Hyderabad', u'countryCode': u'IN', u'url':  
2295414}  
{u'name': u'Bangalore', u'countryCode': u'IN', u'url':  
2295420}  
{u'name': u'Chennai', u'countryCode': u'IN', u'url':  
95424}  
{u'name': u'Mersin', u'countryCode': u'TR', u'url':  
23778}  
{u'name': u'Adana', u'countryCode': u'TR', u'url':  
3678}  
{u'name': u'Ankara', u'countryCode': u'TR', u'url':  
43732}  
{u'name': u'Antalya', u'countryCode': u'TR', u'url':  
343733}
```

inputting the id :

```
u'weoid': '23424982'}
{'u'name': 'u'Venezuela', 'u'countryCode': 'u'VE', 'u'url': 'u'http://where.yahooapis.com/v1/place/23424982', 'u'co
: 23424982}
{'u'name': 'u'Vietnam', 'u'countryCode': 'u'VN', 'u'url': 'u'http://where.yahooapis.com/v1/place/23424984', 'u'cou
424984}
{'u'name': 'u'Petaling', 'u'countryCode': 'u'MY', 'u'url': 'u'http://where.yahooapis.com/v1/place/56013632', 'u'cou
': 56013632}
{'u'name': 'u'Hulu Langat', 'u'countryCode': 'u'MY', 'u'url': 'u'http://where.yahooapis.com/v1/place/56013645', 'u'
eid': 56013645}
{'u'name': 'u'Ahsa', 'u'countryCode': 'u'SA', 'u'url': 'u'http://where.yahooapis.com/v1/place/56120136', 'u'country
eid': 56120136}
{'u'name': 'u'Okayama', 'u'countryCode': 'u'JP', 'u'url': 'u'http://where.yahooapis.com/v1/place/90036018', 'u'cour
0036018}

go through the above json string, find your place name and geoid of that place
enter the geocode of the place at which you want to get top twitter trends : 2295414
```

STEP-3:

Terminal shows you the current trends (the trends that are in the top charts for the last 5 minutes) ,each trend is seperated by “ # ” so copy the strings/characters between a # a space (“ ”), paste it i.e, input the copied text.

****be careful with capitals and spaces ****

current trends hyderabad (since i gave hyderabad's weoid)

```
u'weoid': '56013632'}
{'u'name': 'u'Hulu Langat', 'u'countryCode': 'u'MY', 'u'url': 'u'http://where.yahooapis.com/v1/place/56013645', 'u'
eid': 56013645}
{'u'name': 'u'Ahsa', 'u'countryCode': 'u'SA', 'u'url': 'u'http://where.yahooapis.com/v1/place/56120136', 'u'country
eid': 56120136}
{'u'name': 'u'Okayama', 'u'countryCode': 'u'JP', 'u'url': 'u'http://where.yahooapis.com/v1/place/90036018', 'u'cour
0036018}

go through the above json string, find your place name and geoid of that place
enter the geocode of the place at which you want to get top twitter trends : 2295414
#RamRahimSingh #2Point0 #ArjunReddy #GaneshChaturthi #LavaTeaser PV Sindhu Joe Root 1WEEK TO KING KALYAN BDA
sTonight #MUMVJAI #RajuGariGadhi2 #Mankatha

go through the above trends and input a particular trend
enter the trend you want to analyze (*case sensitive)
```

inputting a trend

```
0036018}

go through the above json string, find your place name and geoid of that place
enter the geocode of the place at which you want to get top twitter trends : 2
#RamRahimSingh #2Point0 #ArjunReddy #GaneshChaturthi #LavaTeaser PV Sindhu Joe
sTonight #MUMVJAI #RajuGariGadhi2 #Mankatha

go through the above trends and input a particular trend
enter the trend you want to analyze (*case sensitive)
```

```
eid': 56120136}
{'u'name': u'Okayama', u'countryCode': u'JP', u'url': u'http://where.yahoo
0036018}
```

```
go through the above json string, find your place name and geoid of that
enter the geocode of the place at which you want to get top twitter tren
#RamRahimSingh #2Point0 #ArjunReddy #GaneshChaturthi #LavaTeaser PV Sind
sTonight #MUMvJAI #RajuGariGadhi2 #Mankatha
```

```
go through the above trends and input a particular trend
enter the trend you want to analyze (*case sensitive)RamRahimSingh
total no. of tweets you want to analyse
```

STEP-4:

Then it asks you for the number of tweets you want to analyse (if u want to analyse n tweets it analyse most recent n tweets on the inputted trend)

```
{u'name': u'Okayama', u'countryCode': u'JP', u'url': u'http://where.yahooaps.com
0036018}
```

```
go through the above json string, find your place name and geoid of that place
enter the geocode of the place at which you want to get top twitter trends : 2295
#RamRahimSingh #2Point0 #ArjunReddy #GaneshChaturthi #LavaTeaser PV Sindhu Joe Ro
sTonight #MUMvJAI #RajuGariGadhi2 #Mankatha
```

```
go through the above trends and input a particular trend
enter the trend you want to analyze (*case sensitive)RamRahimSingh
total no. of tweets you want to analyse10
```

time taken , accuracy depends on this number

note : i did not consider retweets coz sometime we share a tweet (retweet) just becoz a person we like has shared it now this may have an effect (when you want to consider sentiment for predicting stocks you need this accuracy) so the final no. Of tweets analysed will be the number of new recent tweets and hence may not be equal to the number you have inputted , i will resolve this in future modification.

THE RESULT :

It gives the average polarity and subjectivity of the polarity calculated

```
#RamRahimSingh #2Point0 #ArjunReddy #GaneshChaturthi #LavaTeaser PV Sindhu Joe
sTonight #MUMvJAI #RajuGariGadhi2 #Mankatha
```

```
go through the above trends and input a particular trend
enter the trend you want to analyze (*case sensitive)RamRahimSingh
total no. of tweets you want to analyse10
the average polarity of the query inputted is : -0.1
the average subjectivity polarity is : 0.0
abhi@abhi-Lenovo-ideapad-510-15IKB:~/Desktop/twitter_analysis$
```

ANY CRITICISM ,MODIFYCATIONS ,IMPROVEMENTS CAN BE MAILED TO

abhinavreddynimma@gmail.com

thanks for taking time and reading this.