

- Sentiment Analysis - Understanding and extracting feelings from data
- An API lets you access an apps functionality from your code
- TextBlob is awesome for NLP tasks

```
In [1]: #pip install tweepy
#conda install -c conda-forge textblob
#python -m textblob.download_corpora

import tweepy
from textblob import TextBlob
```

```
In [ ]: from credentials import *
#create a file called credentials.py make sure it is in the same folder as
# the credentials file will look like this
#ACCESS_TOKEN = 'xxx'
#ACCESS_SECRET = 'xx'
#CONSUMER_KEY = 'xx'
#CONSUMER_SECRET = 'xx'
```

```
In [2]: #required keys and tokens

auth = tweepy.OAuthHandler(CONSUMER_KEY, CONSUMER_SECRET)
auth.set_access_token(ACCESS_TOKEN, ACCESS_SECRET)
twitter_api = tweepy.API(auth)
```

Important link <https://textblob.readthedocs.io/en/dev/quickstart.html>
[\(https://textblob.readthedocs.io/en/dev/quickstart.html\)](https://textblob.readthedocs.io/en/dev/quickstart.html)

```
In [3]: public_tweets=twitter_api.search_tweets('ukraine')
```

- The sentiment function of textblob returns two properties, polarity, and subjectivity.
- Polarity is float which lies in the range of [-1,1] where 1 means positive statement and -1 means a negative statement.
- Subjective sentences generally refer to personal opinion, emotion or judgment whereas objective refers to factual information.

```
In [4]: for tweet in public_tweets:
        print (tweet.text)
        analysis=TextBlob(tweet.text)
        print (analysis.sentiment)
```

RT @Dovewoman1: @BBCWorld So can we use these designs for more new stamps now? Make them limited editions & charge double or triple to be u...
Sentiment(polarity=0.14123376623376624, subjectivity=0.27435064935064934)
RT @JuliaDavisNews: Kyiv sank 'Moscow' and the Russians are furious. In response to the sinking of the warship 'Moskva,' state TV pundits a...
Sentiment(polarity=0.0, subjectivity=0.0)
RT @andersostlund: This is what I have feared all along. The German government is still ready to throw Ukraine under the bus and make a deal...
Sentiment(polarity=0.1, subjectivity=0.25)
Hiding in Plain Sight, a Soviet-Era Air Defense System Arrives in Ukraine
<https://t.co/2NnyleXnmh> (<https://t.co/2NnyleXnmh>) via @Yahoo
Sentiment(polarity=-0.21428571428571427, subjectivity=0.35714285714285715)
RT @madrid_mike: Putins Defense Minister appears to have had a 'heart attack'.

"...He went on to say that 20 Russian generals have been arrested...
Sentiment(polarity=0.0, subjectivity=0.0)
RT @navalny: 25/31 One shot from Javelin costs \$230,000. For the same money we would get 200 million ad views in different formats and provided...
Sentiment(polarity=0.0, subjectivity=0.3625)
RT @Youblack soul: In Ukraine they are running out of yellow tape and plastic wrap.
This three look just in the edge of their teenage years....
Sentiment(polarity=0.0, subjectivity=0.0)
@MelnykAndriy Der Westen sollte endlich schwere Waffen in die Ukraine liefern damit die Menschen sich angemessen we... <https://t.co/DAHnsxYLwG> (<https://t.co/DAHnsxYLwG>)
Sentiment(polarity=0.0, subjectivity=0.0)
RT @washingtonpost: U.S. to train Ukrainian troops, confirms attack sank Russian warship <https://t.co/flkSiISKga> (<https://t.co/flkSiISKga>)
Sentiment(polarity=0.0, subjectivity=0.0)
RT @MattWalshBlog: Biden is blaming inflation on Putin's invasion of Ukraine. Did Putin invade Ukraine at the beginning of 2021? My memory...
Sentiment(polarity=0.0, subjectivity=0.0)
RT @RadioFreeTom: Also, notice how hot they are to make this about NATO. In their world, losing to NATO is losing to a peer, the real humiliation...
Sentiment(polarity=0.225, subjectivity=0.5750000000000001)
RT @NursesAreTired: While Musk and Starlink's parent company, SpaceX, received adulation from their fans for the gesture, it turns out that...
Sentiment(polarity=0.0, subjectivity=0.0)
RT @UAWeapons: #Ukraine: Two Russian cargo trucks (one with a special cabin) were captured by the Ukrainian troops. <https://t.co/KM3roGEm9G> (<https://t.co/KM3roGEm9G>)
Sentiment(polarity=0.17857142857142858, subjectivity=0.2857142857142857)
RT @StevenMorrell3: Totally agree Whaley, after #Rwanda & #Ukraine even the lifetime Labour supporters in my extended family are going to...
Sentiment(polarity=0.0, subjectivity=0.75)
RT @MSnegovaya: Egged on by the language of annihilation and extermination, Russian soldiers have become willing executioners. <https://t.co/...> (<https://t.co/...>)
Sentiment(polarity=0.125, subjectivity=0.375)

In []: