

TextBlob is a popular python package for processing nature language. It's based on the NLTK library, which is a very strong and powerful library to deal with natural language. There are many APIs in TextBlob for analyzing and handling text data, you can even build your own text classifier based on TextBlob built-in materials.

```
(base) WeiweiCao-MacBook-Pro:~ caoweiwei$ python
Python 3.7.3 (default, Mar 27 2019, 16:54:48)
[Clang 4.0.1 (tags/RELEASE_401/final)] :: Anaconda, Inc. on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> from textblob import TextBlob
>>> from textblob.sentiments import NaiveBayesAnalyzer
>>> tweet = "I fight for the Constitution, individual liberty and the freedoms that make this country great."
>>> tweet_tb = TextBlob(tweet)
>>> tweet_tb.sentiment
Sentiment(polarity=0.4, subjectivity=0.575)
>>> tweet_tb.tags
[('I', 'PRP'), ('fight', 'VBP'), ('for', 'IN'), ('the', 'DT'), ('Constitution', 'NNP'), ('individual', 'JJ'), ('liberty', 'NN'), ('and', 'CC'), ('the', 'DT'), ('freedom', 'NNS'), ('that', 'WDT'), ('make', 'VBP'), ('this', 'DT'), ('country', 'NN'), ('great', 'JJ')]
>>>
```

For this project, we can use
`TextBlob.sentiment` method for

getting the sentiment polarity and subjective results. For further usage, there is a classification model using Bayes algorithm. It can classify the tweets into different clusters.

```
>>> text = "Thrilled to tell you @NASA will contribute the CASE instrument to @ESA's @ARIELTelescope. Together we'll watch starlight streaming through the atmospheres of planets outside our solar system, to understand what they are made of, and how they came to be: https://go.nasa.gov/2Cr9uy8"
>>> text_tb = TextBlob(text, analyzer=NaiveBayesAnalyzer())
>>> text_tb.sentiment
Sentiment(classification='pos', p_pos=0.9821915837049848, p_neg=0.017808416295010582)
>>> text_tb.sentiment.classification
'pos'
>>> text_tb.sentiment.p_pos
```

Reference

<https://textblob.readthedocs.io/en/latest/quickstart.html#quickstart>

https://textblob.readthedocs.io/en/dev/api_reference.html

<https://textblob.readthedocs.io/en/latest/classifiers.html>