Sentiment Analysis using SDK

In [1]:
```
pip install azure-ai-textanalytics --pre
```

```
Collecting azure-ai-textanalyticsNote: you may need to restart the kernel to use updated packages.
  Downloading azure_ai_textanalytics-5.1.0b3-py2.py3-none-any.whl (156 kB)
Requirement already satisfied: azure-common~=1.1 in d:\python\lib\site-packages (from azure-ai-textanalytics)
(1.1.26)
Collecting azure-core<2.0.0,>=1.4.0
  Downloading azure_core-1.9.0-py2.py3-none-any.whl (124 kB)
Requirement already satisfied: msrest>=0.6.0 in d:\python\lib\site-packages (from azure-ai-textanalytics) (0.
6.19)
Requirement already satisfied: six>=1.6 in d:\python\lib\site-packages (from azure-ai-textanalytics) (1.15.0)
Requirement already satisfied: requests>=2.18.4 in d:\python\lib\site-packages (from azure-core<2.0.0,>=1.4.0-
>azure-ai-textanalytics) (2.24.0)
Requirement already satisfied: isodate>=0.6.0 in d:\python\lib\site-packages (from msrest>=0.6.0->azure-ai-tex
tanalytics) (0.6.0)
Requirement already satisfied: certifi>=2017.4.17 in d:\python\lib\site-packages (from msrest>=0.6.0->azure-ai
-textanalytics) (2020.6.20)
Requirement already satisfied: requests-oauthlib>=0.5.0 in d:\python\lib\site-packages (from msrest>=0.6.0->az
ure-ai-textanalytics) (1.3.0)
Requirement already satisfied: idna<3,>=2.5 in d:\python\lib\site-packages (from requests>=2.18.4->azure-core<
2.0.0,>=1.4.0->azure-ai-textanalytics) (2.10)
Requirement already satisfied: chardet<4,>=3.0.2 in d:\python\lib\site-packages (from requests>=2.18.4->azure-
core<2.0.0,>=1.4.0->azure-ai-textanalytics) (3.0.4)
Requirement already satisfied: urllib3!=1.25.0,!=1.25.1,<1.26,>=1.21.1 in d:\python\lib\site-packages (from re
quests>=2.18.4->azure-core<2.0.0,>=1.4.0->azure-ai-textanalytics) (1.25.9)
Requirement already satisfied: oauthlib>=3.0.0 in d:\python\lib\site-packages (from requests-oauthlib>=0.5.0->
msrest>=0.6.0->azure-ai-textanalytics) (3.1.0)

Installing collected packages: azure-core, azure-ai-textanalytics
Successfully installed azure-ai-textanalytics-5.1.0b3 azure-core-1.9.0
```

In [3]:
```
key = "c6bdba82a7994cb0a5f7b6284cf0df62"
endpoint = "https://asfafsv.cognitiveservices.azure.com/"
```

In [ ]:
```
# Authenticate the client
```

In [5]:
```
# Used to Authenticate the client to Azure Platform

from azure.ai.textanalytics import TextAnalyticsClient
from azure.core.credentials import AzureKeyCredential

def authenticate_client():
    ta_credential = AzureKeyCredential(key)
    text_analytics_client = TextAnalyticsClient(
            endpoint=endpoint,
            credential=ta_credential)
    return text_analytics_client

client = authenticate_client()
```

In [6]:
```
def sentiment_analysis_example(client):

    documents = ["I had the best day of my life. I wish you were there with me."]
    response = client.analyze_sentiment(documents=documents)[0]
    print("Document Sentiment: {}".format(response.sentiment))
    print("Overall scores: positive={0:.2f}; neutral={1:.2f}; negative={2:.2f} \n".format(
        response.confidence_scores.positive,
        response.confidence_scores.neutral,
        response.confidence_scores.negative,
    ))
    for idx, sentence in enumerate(response.sentences):
        print("Sentence: {}".format(sentence.text))
        print("Sentence {} sentiment: {}".format(idx+1, sentence.sentiment))
        print("Sentence score:\nPositive={0:.2f}\nNeutral={1:.2f}\nNegative={2:.2f}\n".format(
            sentence.confidence_scores.positive,
            sentence.confidence_scores.neutral,
            sentence.confidence_scores.negative,
        ))

sentiment_analysis_example(client)
```

```
Document Sentiment: positive
Overall scores: positive=1.00; neutral=0.00; negative=0.00

Sentence: I had the best day of my life.
Sentence 1 sentiment: positive
Sentence score:
Positive=1.00
Neutral=0.00
Negative=0.00

Sentence: I wish you were there with me.
Sentence 2 sentiment: neutral
Sentence score:
Positive=0.21
Neutral=0.77
Negative=0.02
```

In [7]:
```
def sentiment_analysis_example(client):

    documents = ["I was happy with my money. Seeing my friends money i got depressed."]
    response = client.analyze_sentiment(documents=documents)[0]
    print("Document Sentiment: {}".format(response.sentiment))
    print("Overall scores: positive={0:.2f}; neutral={1:.2f}; negative={2:.2f} \n".format(
        response.confidence_scores.positive,
        response.confidence_scores.neutral,
        response.confidence_scores.negative,
    ))
    for idx, sentence in enumerate(response.sentences):
        print("Sentence: {}".format(sentence.text))
        print("Sentence {} sentiment: {}".format(idx+1, sentence.sentiment))
        print("Sentence score:\nPositive={0:.2f}\nNeutral={1:.2f}\nNegative={2:.2f}\n".format(
            sentence.confidence_scores.positive,
            sentence.confidence_scores.neutral,
            sentence.confidence_scores.negative,
        ))

sentiment_analysis_example(client)
```

```
Document Sentiment: mixed
Overall scores: positive=0.49; neutral=0.01; negative=0.50

Sentence: I was happy with my money.
Sentence 1 sentiment: positive
Sentence score:
Positive=0.97
Neutral=0.03
Negative=0.00

Sentence: Seeing my friends money i got depressed.
Sentence 2 sentiment: negative
Sentence score:
Positive=0.00
Neutral=0.00
Negative=1.00
```

Using REST API

In [9]:
```
import requests
# pprint is used to format the JSON response
from pprint import pprint
```

In [10]:
```
import os

subscription_key = "c6bdba82a7994cb0a5f7b6284cf0df62"
endpoint = "https://asfafsv.cognitiveservices.azure.com/"
```

In [17]:
```
sentiment_url = endpoint + "/text/analytics/v3.0/sentiment"

documents = {"documents": [
    {"id": "1","text": "I really enjoy the new XBox One S. It has a clean look, it has 4K/HDR resolution and it
    {"id": "2","text": "Este ha sido un dia terrible, llegué tarde al trabajo debido a un accidente automobilist
]}
```

In [18]:
```
headers = {"Ocp-Apim-Subscription-Key": subscription_key}
response = requests.post(sentiment_url, headers=headers, json=documents)
sentiments = response.json()
pprint(sentiments)
```

```
{'documents': [{'confidenceScores': {'negative': 0.0,
                                     'neutral': 0.0,
                                     'positive': 1.0},
                'id': '1',
                'sentences': [{'confidenceScores': {'negative': 0.0,
                                                    'neutral': 0.0,
                                                    'positive': 1.0},
                               'length': 102,
                               'offset': 0,
                               'sentiment': 'positive',
                               'text': 'I really enjoy the new XBox One S. It '
                                       'has a clean look, it has 4K/HDR '
                                       'resolution and it is affordable.'}],
                'sentiment': 'positive',
                'warnings': []},
               {'confidenceScores': {'negative': 0.98,
                                     'neutral': 0.0,
                                     'positive': 0.02},
                'id': '2',
                'sentences': [{'confidenceScores': {'negative': 0.98,
                                                    'neutral': 0.0,
                                                    'positive': 0.02},
                               'length': 92,
                               'offset': 0,
                               'sentiment': 'negative',
                               'text': 'Este ha sido un dia terrible, llegué '
                                       'tarde al trabajo debido a un accidente '
                                       'automobilistico.'}],
                'sentiment': 'negative',
                'warnings': []}],
 'errors': [],
 'modelVersion': '2020-04-01'}
```

In [19]:
```
print(sentiments)
```

```
{'documents': [{'id': '1', 'sentiment': 'positive', 'confidenceScores': {'positive': 1.0, 'neutral': 0.0, 'neg
ative': 0.0}, 'sentences': [{'sentiment': 'positive', 'confidenceScores': {'positive': 1.0, 'neutral': 0.0, 'n
egative': 0.0}, 'offset': 0, 'length': 102, 'text': 'I really enjoy the new XBox One S. It has a clean look, i
t has 4K/HDR resolution and it is affordable.'}], 'warnings': []}, {'id': '2', 'sentiment': 'negative', 'confi
denceScores': {'positive': 0.02, 'neutral': 0.0, 'negative': 0.98}, 'sentences': [{'sentiment': 'negative', 'c
onfidenceScores': {'positive': 0.02, 'neutral': 0.0, 'negative': 0.98}, 'offset': 0, 'length': 92, 'text': 'Es
te ha sido un dia terrible, llegué tarde al trabajo debido a un accidente automobilistico.'}], 'warnings':
[]}], 'errors': [], 'modelVersion': '2020-04-01'}
```

In [ ]:
```

```