

```
from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive

```
cd /content/drive/MyDrive/Papa/

/content/drive/MyDrive/Papa
```

▼ Importing python packages

```
#Data processing packages
import pandas as pd
import numpy as np
pd.set_option('display.max_colwidth', 200)
```

```
#Visualization packages
import matplotlib.pyplot as plt
import seaborn as sns
```

```
#NLP packages
from textblob import TextBlob
```

```
import warnings
warnings.filterwarnings("ignore")
```

▼ Testing Sentiment Analysis (sample)

```
#Testing NLP - Sentiment Analysis using TextBlob
TextBlob("The movie is good").sentiment

Sentiment(polarity=0.7, subjectivity=0.6000000000000001)
```

▼ Importing YouTube comments data

```
#Importing YouTube comments data
comm = pd.read_csv('UScomments.csv',encoding='utf8',error_bad_lines=False);#opening the fi

b'Skipping line 41589: expected 4 fields, saw 11\nSkipping line 51628: expected 4 fi
b'Skipping line 142496: expected 4 fields, saw 8\nSkipping line 189732: expected 4 fi
b'Skipping line 388430: expected 4 fields, saw 5\n'
```



▼ Displaying first 5 rows of data

```
#Displaying the first 5 rows of the data
comm.head()
```

	video_id	comment_text
0	XpVt6Z1Gjjo	Logan Paul it's yo big day !!!!
1	XpVt6Z1Gjjo	I've been following you from the start of your vine channel and have seen all 365 vlog
2	XpVt6Z1Gjjo	Say hi to Kong and maverick for m
3	XpVt6Z1Gjjo	MY FAN . attendanc
4	XpVt6Z1Gjjo	trending 🇵🇪

```
#Finding the size of the data
comm.shape
```

```
(691400, 4)
```

▼ Extracting 1000 random samples from the data

```
#Extracting 1000 random samples from the data
data = comm.sample(2000)
data.shape
```

```
(2000, 4)
```

▼ Calculating Sentiment polarity for each comment

```
#Calculating the Sentiment Polarity
pol=[] # list which will contain the polarity of the comments
for i in comm.comment_text.values:
    try:
        analysis =TextBlob(i)
        pol.append(analysis.sentiment.polarity)

    except:
        pol.append(0)
```

▼ Adding the Sentiment Polarity column to the data


```
#Adding the Sentiment Polarity column to the data
comm['pol']=pol
```

Converting the polarity values from continuous to categorical

```
#Converting the polarity values from continuous to categorical
comm['pol'][comm.pol==0]= 0
comm['pol'][comm.pol > 0]= 1
comm['pol'][comm.pol < 0]= -1
```

Displaying Positive comments

```
#Displaying the POSITIVE comments
df_positive = comm[comm.pol==1]
df_positive.head(10)
```

	video_id	
8	XpVt6Z1Gjjo	
11	XpVt6Z1Gjjo	Dear Logan, I really wanna get your Merch but I don't have the money. We don't e
13	XpVt6Z1Gjjo	
15	XpVt6Z1Gjjo	
18	XpVt6Z1Gjjo	It's been fun watching you grow. I'm at 42 days straight :
22	XpVt6Z1Gjjo	lol PEWDIEPIE accidentally played song with words nig%%r during his stream, u i've just uploa
24	XpVt6Z1Gjjo	I love Logan and Jake so much and thay are so amazing and I lc
27	XpVt6Z1Gjjo	if you get allot of diss likes do you get on the top corr
29	XpVt6Z1Gjjo	I love you so much I love to meet you But I live in Israel You really inspire me I reall you do\nBecause everyone loves it and
30	XpVt6Z1Gjjo	 watch by clicking here y

Displaying Negative comments

```
#Displaying the NEGATIVE comments
df_positive = comm[comm.pol==-1]
df_positive.head(10)
```

	video_id	
9	XpVt6Z1Gjjo	You and your shit brother may have single h
12	XpVt6Z1Gjjo	Honestly Evan is so annoying. Like its not funny watching him try to be famous he'
16	XpVt6Z1Gjjo	Ayyyyooooo Logang what up . This was a hard vlog to watch Logan how dare are Logang Army check my covers and share them can Lc
19	XpVt6Z1Gjjo	Ma
28	XpVt6Z1Gjjo	Evan is a horrible human being he also looks so jealous when you op
34	XpVt6Z1Gjjo	Gotta love Youtube for giving morons the abili
36	XpVt6Z1Gjjo	Can the Pauls please stop saying they're the fastest growing YouTube channel made managed to get all the subscribers you guys ha
42	XpVt6Z1Gjjo	
43	XpVt6Z1Gjjo	
44	XpVt6Z1Gjjo	I go out of my way to

▼ Displaying Neutral comments

```
#Displaying the NEUTRAL comments
df_positive = comm[comm.pol==0]
df_positive.head(10)
```

	video_id	comment_te
0	XpVt6Z1Gjjo	Logan Paul it's yo big day !
1	XpVt6Z1Gjjo	I've been following you from the start of your vine channel and have seen all 365 vlo
2	XpVt6Z1Gjjo	Say hi to Kong and maverick for r
3	XpVt6Z1Gjjo	MY FAN . attendan
4	XpVt6Z1Gjjo	trending
5	XpVt6Z1Gjjo	#1 on trending AYYEEEE!
6	XpVt6Z1Gjjo	The end though 🤖👍
7	XpVt6Z1Gjjo	#1 trending!!!!
10	XpVt6Z1Gjjo	There should be a mini Logan Paul tr
14	XpVt6Z1Gjjo	aw geez rick this guy is the face of YouTul

Calculating the count of Positive, Negative & Neutral comments

```
comm.pol.value_counts().plot.bar()  
comm.pol.value_counts()
```

```
1.0    300796
```

```
0.0    284450
```

```
-1.0    106154
```

```
Name: pol, dtype: int64
```

