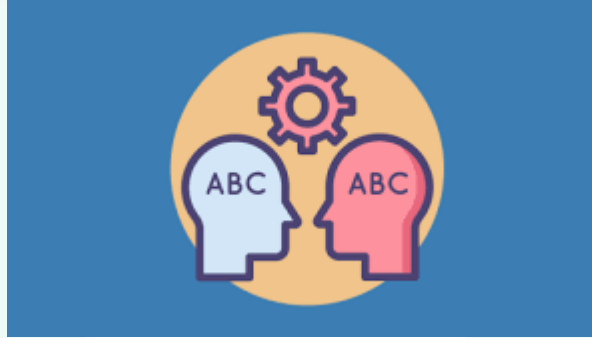


# Natural Language Processing

NLP



Sentiment  
Analysis



Natural language processing (NLP) which works with voice and text.

Using NLP, we can understand the sentiment of the consumers by analyzing the comments and texts.

# Traditional media



In case of traditional media for example television, billboard and newspaper we have lot of difficulties.

Due to lack of data, we cannot do the impact assessment, can not collect feedback from the consumer and can not take immediate action if something goes wrong.

# Latest media



Closeup No.1 toothpaste in Bangladesh | 10 sec TVC CP | Closeup Bangladesh

2,629 views • Nov 16, 2020

68 likes 0 dislikes SHARE SAVE ...

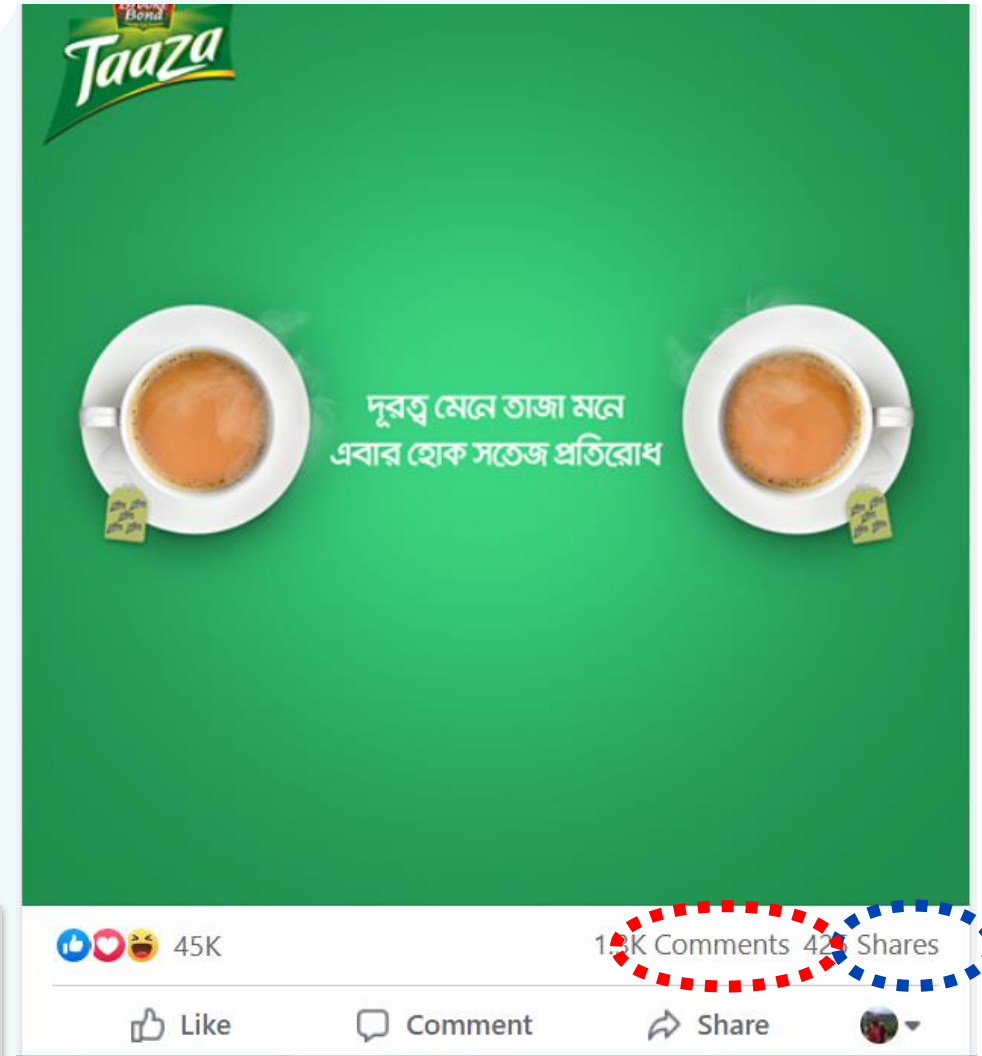
Closeup Bangladesh 603K subscribers

SUBSCRIBE

Try the new Closeup with Triple Fresh Formula and get a Closeup mug free!

6 Comments SORT BY

Whereas, in case of latest media like Facebook and YouTube we now have the access to lot of data for example number of views, likes, dislikes, shares, subscribers, and comments



# Analytical use of latest media



**Numerical Analysis**  
like, dislike, share, view

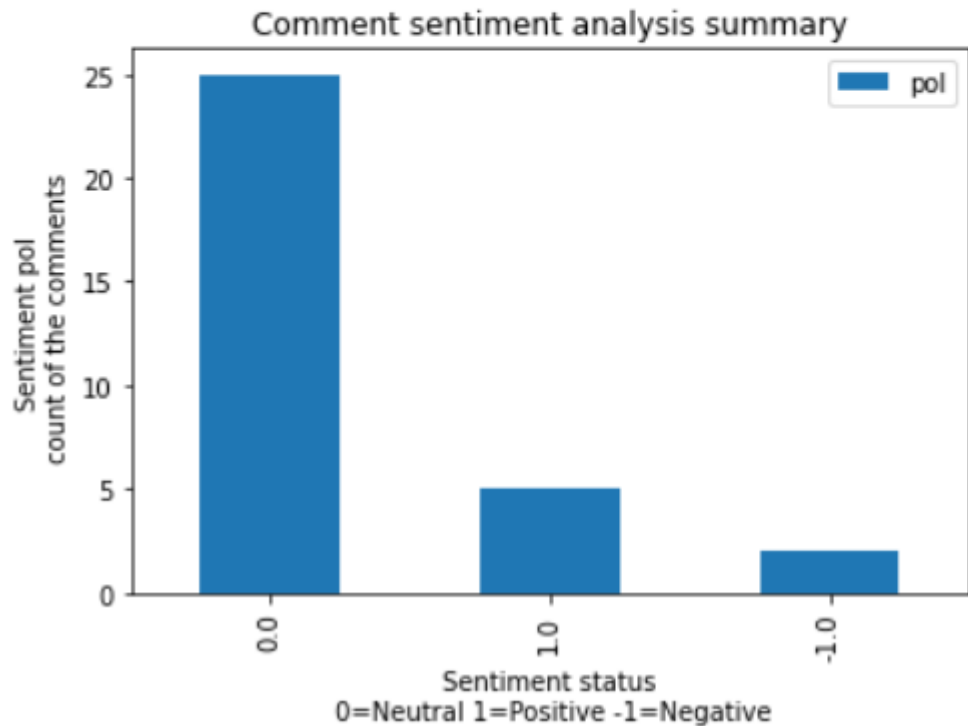


**Analyzing comments**

We can easily do numerical analysis by PowerBI and excel.  
But to analyze the comments we need support from machine learning models.

# Sentiment Analysis – Machine Learning Model

```
df.pol.value_counts().plot.bar()
df.pol.value_counts()
plt.legend()
plt.xlabel('Sentiment status\n 0=Neutral 1=Positive -1=Negative')
plt.ylabel('Sentiment pol\n count of the comments')
plt.title('Comment sentiment analysis summary')
plt.show()
```



Using the video ID in an API system we can download all the comments. Then we can read the comments one by one to understand but which is impossible for human being.

But using a library, we can divide all comments whether the comment is positive, negative, or neutral.

And this is how we can summarize. You can see one video has lot of neutral comments one only few positive comments.

With this machine learning model fast and real time analysis possible, consumers sentiment can be easily understood.