Vidyalankar Institute of Technology Accredited A+ by NAAC	DEPARTMENT OF COMPUTER ENGINEERING

Experiment No. 01

Semester	B.E. Semester VIII – Computer Engineering
Subject	Social Media Analytics
Subject Professor In-charge	Prof. Amit Alyani
Academic Year	2024-25

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Title: YouTube video sentiment analysis

Implementation:

```python
from googleapiclient.discovery import build

# API Key and Video ID
api_key = "AIzaSyB4Pok_vojBvhTXAxZ0t9iCwJlVfMCLhW4"
video_id = "byJ7pxxhaDY"

# Build YouTube service
youtube = build("youtube", "v3", developerKey=api_key)

# Fetch comments
def fetch_comments(video_id):
    comments = []
    request = youtube.commentThreads().list(
        part="snippet",
        videoId=video_id,
        maxResults=100
    )
    response = request.execute()

    while response:
        for item in response["items"]:
            comment = item["snippet"]["topLevelComment"]["snippet"]["textDisplay"]
            comments.append(comment)

        # Check for next page token
        if "nextPageToken" in response:
            request = youtube.commentThreads().list(
                part="snippet",
                videoId=video_id,
                pageToken=response["nextPageToken"],
                maxResults=100
            )
            response = request.execute()
        else:
            break

    return comments

# Fetch and print comments
comments = fetch_comments(video_id)
for idx, comment in enumerate(comments[:100], start=1):
    print(f"{idx}: {comment}")
```

```
1: Watch Solo Leveling Season 2 here! <a href="http://got.cr/cc-sl2pv">got.cr/cc-sl2pv</a>
2: Yep the animation is really nice  they should&#39;ve not remove some of the Gore stuff, 😁 it makes the video more epic... Just
3: Ant dungeon in season 3 and double gate dungeon in season 4🤩
4: Every one is taking About the Aries ok Dona pubg mobile 😱😱😱😱😱😱😱😱
5: Mommy cha in the thumbnail is crazy approved baddie hehe
6: <a href="https://www.youtube.com/watch?v=byJ7pxxhaDY&amp;t=59">0:59</a> is chedzu?
7: Will Beru appear in a second part ?
8: I caaaaan&#39;t believe I cried over the end of the trailer
9: Sister Leveling SEASON 2 IS BACK BABY!!!
10: Is he gonna rewind time in S2?
11: This is peak
12: Feels like a sun wookong esk character that will eventually rebel against the gods and become too power
13: I completed 200 episodes in manhwa🤩
14: Damn
15: They ate they ate they ate
16: Cool
17: HELL YEAAAAAH
18: A R I S E ! ! !
19: Solo leveling season 2=<br>jin woo arua farm
20: Bruhh!!! Did they animate everything already???
21: The quality is incredible. I keep rewatching the episodes over and over again.
22: God damn it, the plap scene is probably like idk, 5 or even 10 fking years from now
23: Arise!
24: so season will end before the jeju arc or after?
25: He&#39;s aura not purple yet?
26: <a href="https://www.youtube.com/watch?v=byJ7pxxhaDY&amp;t=18">0:18</a> bro went from gang to full on legion in just a few mont
27: Please upload seaon 2
28: I read the manwha and I can say that this anime will be the best for 2025 and other seasons will be perfect.
29: Shadow king has returned
30: &quot;Only on Crunchyroll&quot;<br><br>LOL! 😂😂😂
31: Nice, I haven&#39;t heard TK since Tokyo Ghoul, and its goated opening.
32: Lisa is top-notch in this song
```

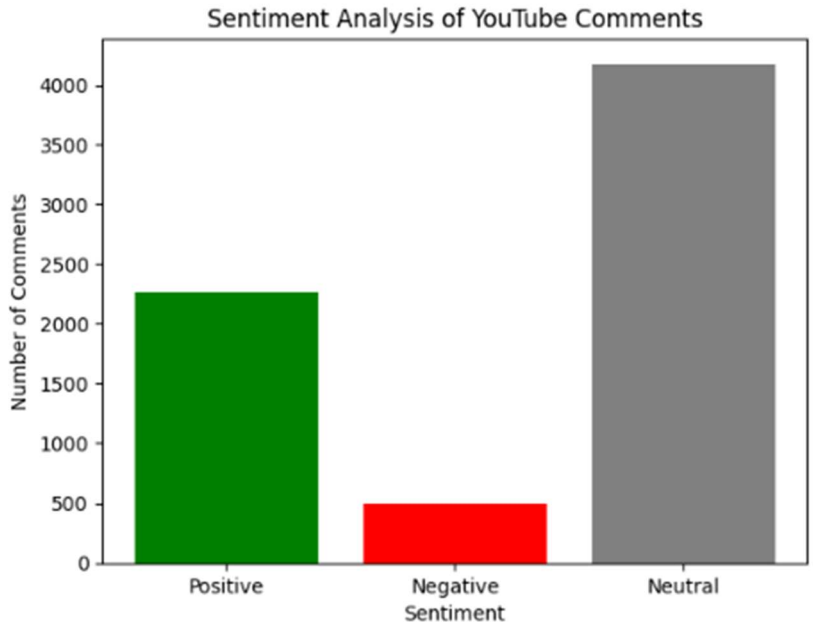
```
100: Kinda glad they didnt change the names to Japanese like in first season
```

```python
from textblob import TextBlob

def analyze_sentiment(comment):
    # Create a TextBlob object
    blob = TextBlob(comment)

    # Get polarity: -1 = negative, 0 = neutral, 1 = positive
    polarity = blob.sentiment.polarity

    # Determine sentiment based on polarity
    if polarity > 0:
        sentiment = "Positive"
    elif polarity < 0:
        sentiment = "Negative"
    else:
        sentiment = "Neutral"

    return sentiment, polarity

# Example: Analyze sentiment of the first 10 comments
for idx, comment in enumerate(comments, start=1):
    sentiment, polarity = analyze_sentiment(comment)
    print(f"Comment {idx}: Sentiment = {sentiment}, Polarity = {polarity}")
```

```
Comment 6780: Sentiment = Neutral, Polarity = 0.0
Comment 6781: Sentiment = Neutral, Polarity = 0.0
Comment 6782: Sentiment = Neutral, Polarity = 0.0
Comment 6783: Sentiment = Neutral, Polarity = 0.0
Comment 6784: Sentiment = Positive, Polarity = 0.25
Comment 6785: Sentiment = Positive, Polarity = 0.2857142857142857
Comment 6786: Sentiment = Positive, Polarity = 0.35
Comment 6787: Sentiment = Neutral, Polarity = 0.0
Comment 6788: Sentiment = Neutral, Polarity = 0.0
Comment 6789: Sentiment = Neutral, Polarity = 0.0
Comment 6790: Sentiment = Neutral, Polarity = 0.0
Comment 6791: Sentiment = Neutral, Polarity = 0.0
Comment 6792: Sentiment = Neutral, Polarity = 0.0
Comment 6793: Sentiment = Neutral, Polarity = 0.0
Comment 6794: Sentiment = Positive, Polarity = 0.25
Comment 6795: Sentiment = Neutral, Polarity = 0.0
Comment 6796: Sentiment = Neutral, Polarity = 0.0
Comment 6797: Sentiment = Neutral, Polarity = 0.0
Comment 6798: Sentiment = Neutral, Polarity = 0.0
Comment 6799: Sentiment = Neutral, Polarity = 0.0
Comment 6800: Sentiment = Positive, Polarity = 0.6
Comment 6801: Sentiment = Neutral, Polarity = 0.0
Comment 6802: Sentiment = Positive, Polarity = 0.7
```

```
Comment 6837: Sentiment = Neutral, Polarity = 0.0
Comment 6838: Sentiment = Neutral, Polarity = 0.0
```

```python
import matplotlib.pyplot as plt



# Analyze sentiment of the comments
sentiments = {"Positive": 0, "Negative": 0, "Neutral": 0}

for comment in comments:
    sentiment, _ = analyze_sentiment(comment)
    sentiments[sentiment] += 1

# Create a bar graph for the sentiments
labels = list(sentiments.keys())
values = list(sentiments.values())

plt.bar(labels, values, color=["green", "red", "gray"])
plt.title("Sentiment Analysis of YouTube Comments")
plt.xlabel("Sentiment")
plt.ylabel("Number of Comments")
plt.show()
```



Insights:

- Most of the audience thought the trail of average not too good not to bad
- Very few thought it was bad adaptation.