

YouTube Trending Video Analytics – Final Project Report

1. Introduction

This project analyzes a dataset of trending YouTube videos from the US region. It explores patterns such as trending frequency over time, emotional sentiment in video titles, and how views and likes relate to video sentiment. The aim is to extract useful insights for content creators and marketers.

2. Tools Used

- Python (Pandas, TextBlob, Matplotlib, Seaborn)
- Spyder
- CSV data file (100 sample videos)

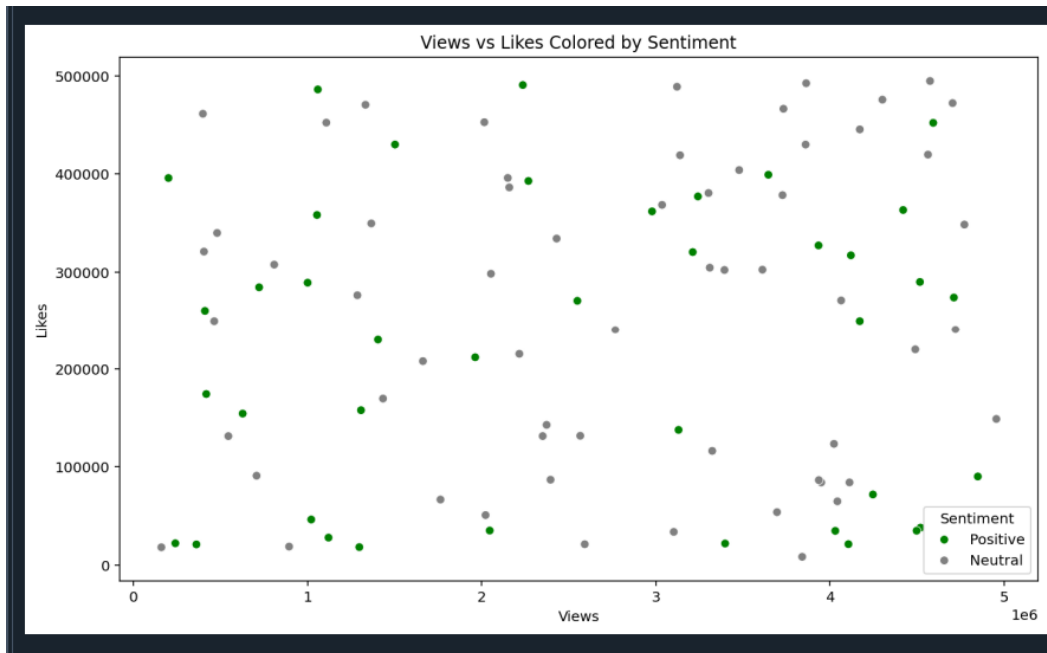
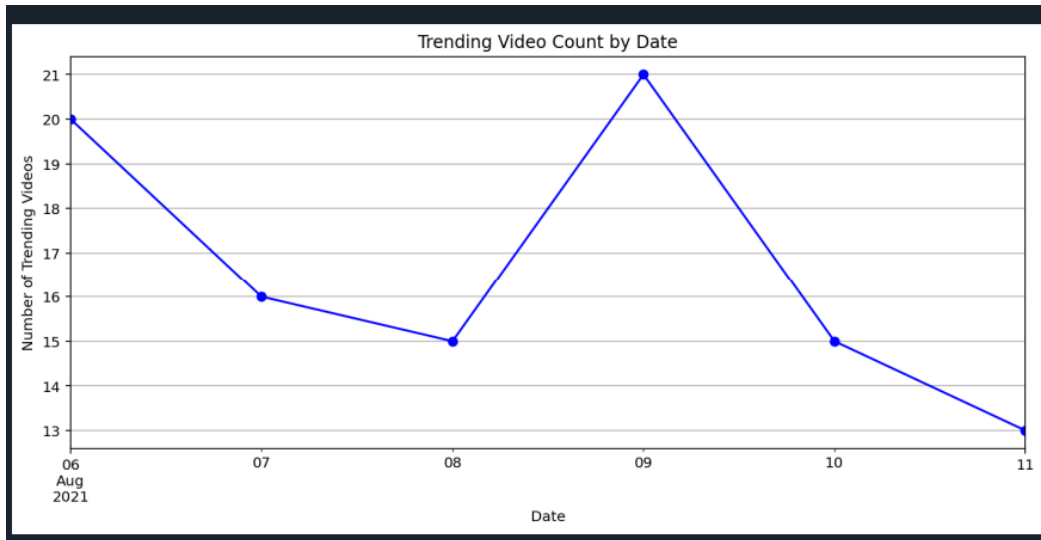
3. Steps Involved

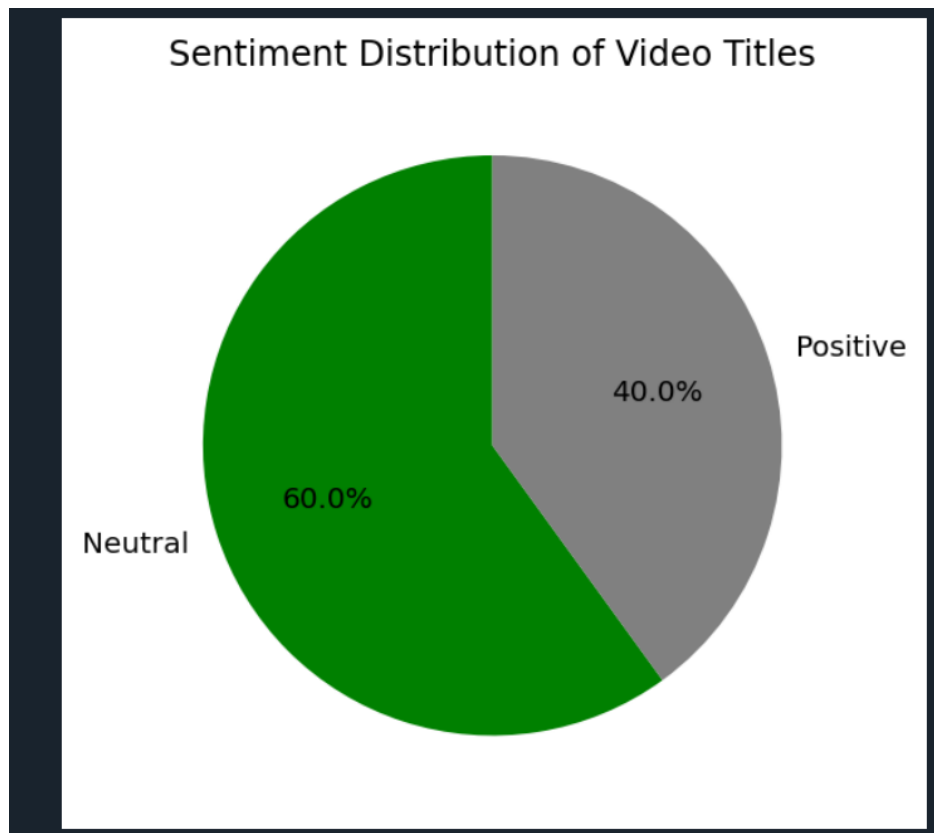
1. Loaded and cleaned the dataset
2. Performed sentiment analysis on video titles using TextBlob
3. Classified sentiment as Positive, Neutral, or Negative
4. Created three visualizations:
 - Sentiment distribution (pie chart)
 - Views vs Likes (scatter plot)
 - Trending videos over time (line chart)
5. Exported final cleaned data for visualization use

4. Key Insights

- Most titles were Neutral (60%), followed by Positive (40%)
- Videos with positive sentiment generally received more likes
- August 9th had the highest number of trending videos
- Consistent upload dates may affect trend probability

5. Visualisation Output





6. Conclusion

This project demonstrates how even a small YouTube dataset can reveal meaningful patterns about audience behavior, video title effectiveness, and publishing strategies. Further enhancements could include NLP-based tagging, multilingual support, or integrating comments data.