# YouTube Trending Analytics Project Report

## 1. Introduction

YouTube is one of the most influential platforms for content consumption. This project analyzes trending YouTube videos across regions to uncover insights about viewership patterns, sentiment, category performance, and engagement.

## 2. Abstract

The objective of this project was to explore patterns in YouTube trending videos using data analytics. Key goals included identifying top-performing content categories, analyzing sentiment in titles, measuring engagement, and understanding regional differences in trends. The findings provide actionable insights for content creators and digital strategists to optimize performance.

## 3. Tools Used

- Python (Pandas, Seaborn) for data cleaning and exploratory analysis  
- TextBlob for sentiment analysis  
- Tableau for visual analytics and storytelling  
- Microsoft Excel for initial dataset review and formatting

- Microsoft Power Point for visual storytelling

## 4. Steps Involved in Building the Project

1. Data Acquisition: Downloaded YouTube trending dataset from Kaggle.  
2. Data Cleaning: Removed nulls/duplicates, formatted dates, and normalized country codes.  
3. Sentiment Analysis: Used TextBlob to classify titles into Positive, Neutral, or Negative.  
4. Metric Creation: Calculated Engagement Score = Likes + Comments – Dislikes.  
5. Visual Analysis: Built dashboards in Tableau covering categories, sentiment, engagement, views over time, and regional trends.  
6. Storytelling: Developed a visual and narrative report using charts and key findings in power point.

## 5. Conclusion

The project revealed that Great Britain has the highest viewership and longest trending durations, while France, Germany, and Canada show the highest engagement. Sentiment analysis showed positivity correlates with interaction. These insights can be used to improve video strategy, targeting, and content design for broader impact on YouTube.