

FINAL REPORT: YouTube Trending Video Analytics

Internship Project Report

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Introduction

YouTube is the world's largest video platform, with trending content reflecting cultural interests, viral trends, and public sentiment. This project aims to analyze trending video data from two regions—US and GB—focusing on **engagement**, **sentiment**, and **category-level behavior**. The goal is to derive insights into what makes content trend regionally and globally.

Tools Used

Tool	Purpose
Python	Data cleaning, sentiment analysis
SQLite	SQL analysis on views and categories
Power BI	Interactive dashboards and storytelling
TextBlob	Title/tag sentiment scoring

Key Metrics Analyzed

Average Views by Category & Region

Sentiment of Titles and Tags

Most Liked & Commented Videos

Total Views Over Time

Views by Channel & Publish Time

Insights & Data Storytelling

1 Views by Region

US accounts for **71%** of total trending views in the dataset, with **GB** contributing 29%.

GB videos tend to have shorter trending lifespans but perform well in engagement ratios (likes/comments to views).

 Visual: Treemap of Views by Region

2 Trending Over Time

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Consistent spikes in trending views occur mid-week and at month-ends.

Dates like **26 May 2018** and **14 May 2018** show massive peaks, likely due to major releases or viral content drops.

 *Visual: Line chart of total views over time*

3 Sentiment Analysis

TextBlob sentiment analysis shows **US and GB titles** are generally more positive (average polarity $\approx 0.25\text{--}0.30$).

IN region titles trend neutral to slightly negative, suggesting a difference in content tone.

 *Visual: Sentiment score distribution by region*

4 Most Engaging Videos

The top 5 most liked and commented videos are **BTS (방탄소년단)** music videos — trending in both **US and GB** simultaneously.

Videos like **Childish Gambino – This Is America** also feature high engagement, making a strong case for cross-cultural virality.

 *Visual: Table of most liked/commented videos*

5 Category Performance (Genres)

Music, Entertainment, and Sports dominate the charts across regions.

SQL analysis of category_avg_views.csv shows Music leads with an average of **2.8M+ views per video** across all countries.

 *Visual: Bar chart of average views by category and region*

Recommendations

Creators should use **positively phrased titles** to improve sentiment and engagement.

Global artists like BTS have strong cross-regional appeal—indicating success factors beyond language and region.

Brands & marketers should analyze **category and sentiment data by region** before launching YouTube ad campaigns.

Upload timing impacts virality—post mid-week or around end-of-month based on spike patterns.