YouTube Trending Video Analytics Report

#Introduction

This project explores patterns in YouTube trending videos using datasets from different regions, focusing primarily on India. By analyzing metrics like views, likes, sentiment, and category trends, we aim to understand what drives virality on the platform.

#Abstract

The core objective is to identify popular content categories, analyze title and tag sentiment, and visualize trends over time using data science tools. The insights drawn can help content creators, marketers, and platform analysts make data-informed decisions.

#Tools Used

Python (Pandas, Matplotlib, Seaborn, TextBlob, SQLite)
SQL (for ranking and aggregations)
Tableau / Power BI (for dashboard visualizations)

#Steps Involved in Building the Project

Data Cleaning: Combined multiple regional datasets, parsed date formats, handled missing values.
Sentiment Analysis: Applied TextBlob on video titles and tags to extract polarity and subjectivity.
SQL Analytics: Ranked video categories by average views, likes, and dislikes.
Time-Series Visualizations: Plotted daily trending durations and category-wise video trends over time.
Dashboard Preparation: Generated a summary CSV file for Tableau/Power BI to explore category popularity and sentiment.
Reporting: Compiled key findings into a report to highlight actionable insights.

#Conclusion

The project reveals that categories like Music and Gaming consistently receive the most traction. Most videos trend within a few days of publishing, emphasizing the importance of early engagement. Positive sentiment in titles correlates with higher viewer interaction. These insights can help creators tailor content more effectively and improve discoverability.