■ Final YouTube Data Analysis Report

Project: YouTube Trending Video Analysis

Tools Used: Python (pandas, TextBlob), SQLite, Power BI

1■■ Data Cleaning and Preparation

Dataset of 161,470 rows cleaned using pandas. Removed duplicates, handled missing values, standardized columns, and saved as **youtube_cleaned.csv**.

2■■ Sentiment Analysis

Using TextBlob, sentiment polarity scores were computed for titles and tags. Average sentiment was slightly positive (0.04).

Metric	Average Sentiment
Title Sentiment	0.04
Tag Sentiment	0.04

■ Top Positive Titles include:

BEST OF 2017 LEGRANDJD, Ed Sheeran – Perfect Duet, Londons Best Burger

■ Top Negative Titles include:

Resident Evil 7 Biohazard, The Shocking Truth about Stephen Hawking, Terrifying Ski Lift Malfunction

3■■ SQL Category Ranking

SQL query used to rank categories by average views. Entertainment and Music ranked highest.

4■■ Power BI Dashboard Insights

Interactive dashboard explored average views by category, sentiment trends, and engagement metrics. Videos posted on weekends performed better.

5■■ Key Takeaways

■ Entertainment dominates with top viewership.

■ Slightly positive tones perform best.

■ Timing (weekends/evenings) boosts engagement.

■■ Controversial titles drive comments.

■ Data-driven insights support creator strategy.

■ Conclusion

This end-to-end analysis combines Python, SQL, and Power BI to uncover how sentiment, timing, and content type shape YouTube trends. These insights guide creators toward smarter publishing and engagement strategies.