

YouTube Trending Video Analysis

1. Introduction

With the explosive growth of video content online, understanding what makes a YouTube video trend has become both a technical and creative challenge. This project focuses on analyzing publicly available trending video data to uncover patterns in viewer behavior, engagement, and content performance.

2. Abstract

The aim of this project is to explore key features such as category, publish time, title length, tag count, and user engagement metrics (likes, views, comments) to identify what influences a video's chances of trending. The project uses real data from YouTube's trending section across the United States and visualizes insights using Tableau to make them interactive and accessible.

3. Tools Used

- Microsoft Excel ? Data cleaning, preprocessing, and feature engineering
- Tableau Public ? Data visualization and dashboard creation
- JSON (YouTube API) ? For mapping category_id to readable category_name

4. Steps Involved in Building the Project

1. Data Collection

- Dataset from Kaggle: YouTube Trending US Videos
- Supplemented with category metadata from YouTube API (JSON)

2. Data Preprocessing

- Removed duplicates and irrelevant columns
- Created new features: title_length, tag_count, publish_day, publish_hour
- Mapped category_id to category_name

3. Data Visualization in Tableau

- Created individual charts for: Top Categories, Best Publish Times, Title vs Views, etc.
- Assembled into an interactive dashboard

4. Insights Derived

- Music and Entertainment dominate views

YouTube Trending Video Analysis

- Evening posts on weekdays trend better
- Short titles, moderate tags perform best
- Likes and comments strongly correlate

5. Conclusion

This project highlights the importance of data in optimizing content performance on platforms like YouTube. By identifying key factors that influence virality, creators and analysts can better tailor their strategies. Tableau's interactivity made it easy to explore trends across various dimensions, making data storytelling more effective and insightful.