

Data and Decisions
Project Proposal
Group #2

For our team's project, we will be looking at the factors that affect trending videos on YouTube. We have determined that our dependent variable will be the total days a video was trending. Our team aims to answer the following questions with this project:

- Can we predict how many total days a video will be trending once it becomes ranked in the trending list?
- What variables affect the length of time a video spends trending?

The answers to these questions would allow our team to provide recommendations for keeping a video ranked on the trending list. Additionally, we would be able to provide insight for effective advertising on the videos that are most likely to continue trending.

The independent variables that we believe are related to the total days a video is trending are the number of likes, dislikes, and comments after the video is trending; the video title, number of video shares, video category, channel published from, the publish date, days from publish to trending, and the rate of growth of video views.

1. A high number of likes, dislikes, and comments reflects the engagement rate with the video which would influence the amount of conversation, sharing, and repeated views of the video to keep it trending. - rate of growth
2. An interesting or catchy title invites curiosity and is likely to positively influence viewers' decision to watch the video. → CHARACTER COUNT
3. The more times a video is shared with others would increase the potential amount of views from a wider audience.
4. The more popular a video category, such as music or entertainment, the more likely we believe a video in that category will stay trending.
5. Well-known channels or channels with a high number of subscribers would likely attract the most views.

6. Whether a video is posted in the summer vs. winter or during the work-week vs. the weekend may influence how much time viewers are spending watching YouTube videos.
7. A short amount of time between the day a video is published and the day it begins trending indicates a rapid influx of views, which may attribute to the video trending longer.
8. A high rate of growth in video views once the video begins trending would mean that the video's reach is continuing to grow over time and should stay trending for longer.

To conduct our analysis, we will be primarily using a dataset we found on Kaggle that holds information pertaining to all the videos that were trending on YouTube from 2017 - 2018. One limitation we are currently facing is that the dataset we plan to use does not include any information on videos that weren't ever trending on YouTube. We have also had a difficult time defining the relationships between our variables. For example, a high amount of views leads to a video trending which leads to even more views. Similarly, while the number of likes, dislikes, and comments seems to indicate higher engagement with a video which could lead to a video trending, they could also just be a byproduct of the video trending. Through further analysis, we hope to understand these relationships better to determine what variables actually affect how the total number of days a video is trending.

We've provided a graph of the number of views for a trending video across the days the video was trending to show the increasing number of video views for the additional days it was trending. We plan to analyze the relationship between the rate of growth of video views and days trending further.

views vs. trending_date | Childish Gambino - This is America

