Trending YouTube Videos 8.3.20-4.5.23

Intro:

My mission in utilizing this dataset is to try and help creators understand some of the best practices to garner more viewership and engagement. To do this, I used data directly from YouTube's API on trending videos. I used to excel along with VLOOKUP, pivot tables to clean and view the data in various ways to get the best results. Here are my findings that I do wish to expand on in the future as well.

My hope is that this information will be able to help newer creators to help them grow.

Situation:

Average viewership has been down since the years of COVID, and millions being laid off, right now creators are trying to still grow, but have mostly seen decreases in average views/engagement per video. The mission of this report is to help creators keep ahead of the game and increase their viewership and engagement with specific data pulled directly from YouTubes API on trending videos.

In regard to official numbers based on this data, the average viewership from 2020 to 2021 went up by 3% only to shoot down by 35% in 2022 and another 3% in 2023 now. Along with those changes, we've seen a decrease in likes year over year of 3% in 2021, 44% in 2022, and 21% in 2023. Comments decreased by even larger margins of 47% in 2021, 67% in 2022, and 16% in 2023. My initial thought on this is that this may be do to the factors of COVID laying millions off, to where a lot of people had more time to watch YouTube than ever before, which also left them with more time to leave comments as well.

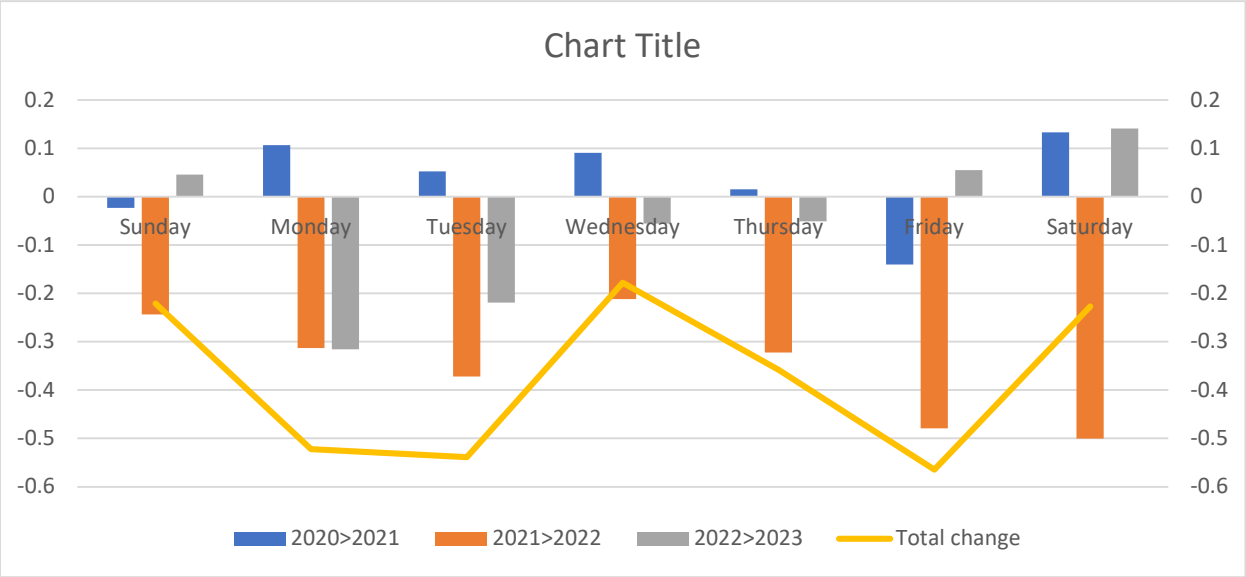
Best Day(s) and Time(s) to Post for Most Views Per Video:

According to the YouTube trending dataset, one of the prevalent factors in higher viewership on average seems to be the day of the week and time of day the video is posted. Based on this data, in 2023 Friday seems to be a clear winner in terms of maximizing viewership and engagement on average, showing a 8.09% higher viewership than the second highest day of Saturday. Along with this, for Friday is 8.04% higher and comment count is even higher at a staggering 34.63% higher number of comments from Saturday.

On the inverse, where Friday is the highest on average, Tuesday seems to be the lowest average viewership, where there is a difference of 38.23%. Including the difference in likes of 42.14%, and comment count of 53.38%.

Along with these changes, there have been changes year over year between the days of the week with Friday having the biggest decrease in average viewership from 2020 to 2023 of over 50%. Even with this though, Friday is still the best day overall to post your videos.

Table 1.1: Year over year changes in viewership between days of the week from 2020 to 2023:



In regard to the time of release, even though the most amount of videos are posted at 1pm and 12pm EST, based on the data, you'll yield the most amount of average viewership and engagement by posting later at night, between 11pm-5am EST. 5am EST leads the pack having a 26.42% higher average viewer count, 19.15% higher amount of likes, and 13.93% higher amount of comments per video compared to the 2nd highest at 1am. However, this does seem to be skewed by multiple different overseas creators posting at these times, which there are not as many of these videos that have gone trending, but when they do they have on average higher viewer counts. Some of these creators were BLACKPINK, starshiptv, and more.

Most Trending Categories:

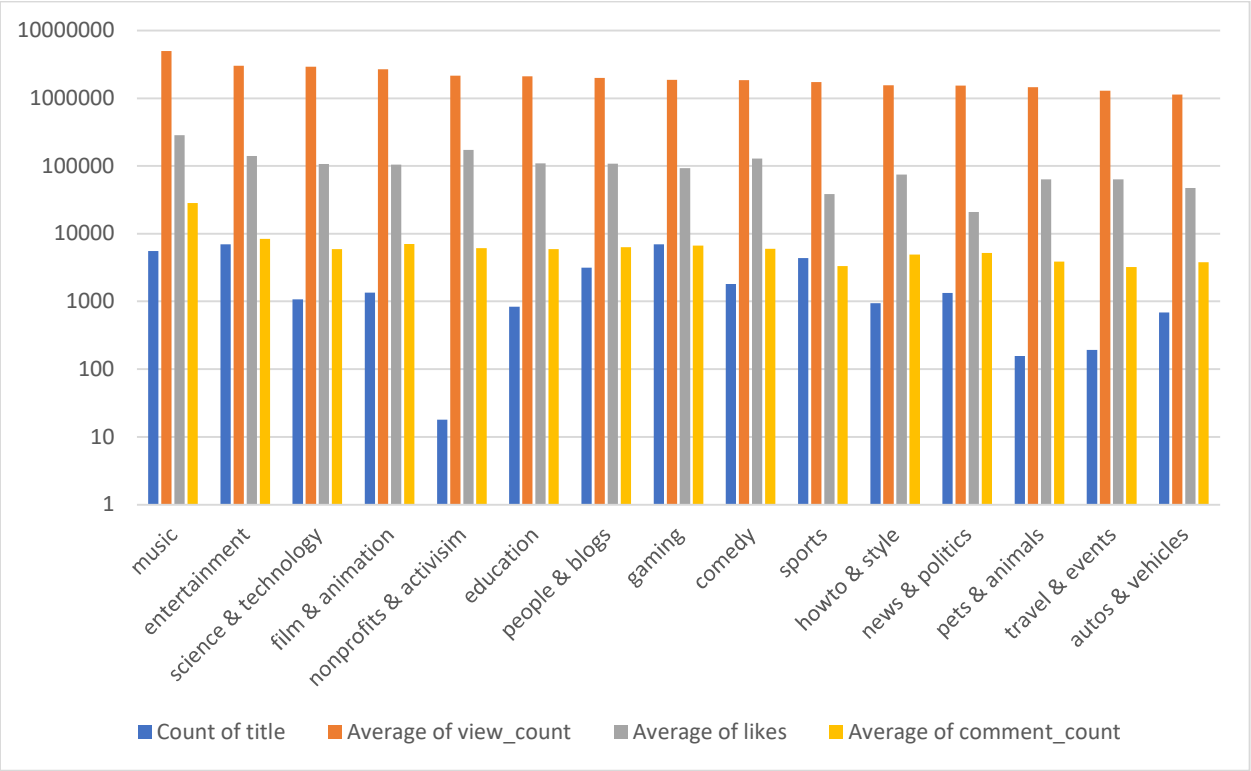
Based on the data from this YouTube trending dataset, you can see that the category for Music is by far the highest average viewer counts and engagements. Although the most "trending" category however is gaming, and even though this is not nearly the most engaged, or viewed category, it seems to garner the most number of videos that go trending. The close second to this is entertainment, with not even 50 videos lower than gaming that went trending in the last couple of years. With entertainment though, the average viewers and engagement is significantly higher than gaming. My initial assessment on why gaming is a more trending topic though is just based on the amount of "hype" that has been garnered around multiple different esports, and that the viewers with typically the most available time to view are children and kids.

One of my thoughts on how I would try and dig deeper into this is to go directly into YouTubes API to get demographic information on the number of viewers per category along with their ages, geography, etc. to see if my theory that kids are potentially one of the higher viewing demographics on YouTube.

Along with all of the categories, one trend we do see in this data is that viewership correlates heavily to the number of likes/comments on any specific video, meaning one big factor to growth should be to get

as many people to like and comment on your videos as possible. One factor we see in a lot of these in looking at year over year changes is that the amount of viewership, likes and comments have dropped since 2020 however.

Table 2.1: Category data based on logarithmic scale base of 10:



Comparison Between Top Channels:

Another topic I wanted to explore in my research was to see the performance of top channels versus others to see how they are typically growing as a channel and see if I could find any correlations between the data. The 2 channels I chose to do were both under the Entertainment category, MrBeast, as the largest channel on YouTube, and Sidemen, which is another growing channel that uses similar antics in their videos.

Table 3.1: Sidemen's trending videos year over year performance:

Year	Videos Posted	Average #tags	Total View Count	AVG View Count	Likes	Comment Count
2020	8.00	3.5	51,957,724.00	6,494,715.50	3,730,499.00	168,271.00
2021	7.00	3	65,437,671.00	9,348,238.71	3,945,213.00	201,369.00
2022	15.00	3	145,842,562.00	9,722,837.47	7,983,802.00	269,785.00
2023	4.00	3	35,262,913.00	8,815,728.25	1,937,166.00	49,376.00
Grand Total	34.00	3.117647059	298,500,870.00	8,779,437.35	17,596,680.00	688,801.00

Table 3.2: MrBeast's trending videos year over year performance:

Year	Videos Posted	Average #tags	Total View Count	AVG View Count	Likes	Comment Count
2020	17.00	1.176470588	427,991,436.00	25,175,966.82	27,990,544.00	2,493,328.00
2021	27.00	1	1,018,994,738.00	37,740,545.85	64,782,197.00	3,428,176.00
2022	13.00	1	600,980,094.00	46,229,238.00	32,257,464.00	1,232,543.00
2023	4.00	1	307,015,373.00	76,753,843.25	17,927,788.00	622,077.00
Grand Total	61.00	1.049180328	2,354,981,641.00	38,606,256.41	142,957,993.00	7,776,124.00

Table 3.3: Sidemen's performance compared to MrBeast's:

Year	Videos Posted	Average #tags	Total View Count	AVG View Count	Likes	Comment Count
2020	-9.00	2.32	-376,033,712.00	-18,681,251.32	-24,260,045.00	-2,325,057.00
2021	-20.00	2.00	-953,557,067.00	-28,392,307.14	-60,836,984.00	-3,226,807.00
2022	2.00	2.00	-455,137,532.00	-36,506,400.53	-24,273,662.00	-962,758.00
2023	0.00	2.00	-271,752,460.00	-67,938,115.00	-15,990,622.00	-572,701.00
Grand Total	-27.00	2.07	-2,056,480,771.00	-29,826,819.06	-125,361,313.00	-7,087,323.00

One conclusion that could be drawn from this information is that MrBeast's channel growth has been exponential, and hard to follow, as his average growth per year in average viewer count is 30.47%, peaking currently in 2023 at 39.77% growth so far! On the inverse, with the Sidemen channel, they've seen an average growth since 2020 of only 8.03%, peaking at 30.52% in 2020, but seeing an opposite currently in 2023 of a 10.29% decline in average viewership so far this year.

One other conclusion to be made on this information is that there doesn't seem to be a strong correlation between the number of tags put on a video to the amount of views, as we see MrBeast either puts none, or only one tag on his videos. In further research of the whole dataset, it is a constant that the number of tags doesn't take too much effect to the amount of views your video will garner.

Another constant we are seeing in even top channels like MrBeast is that the number of comments per video has dropped pretty tremendously, and based on my theory this was partially due to the amount of people back to work by 2022, losing the free time they had while laid off during the COVID outbreak. Even though seeing these losses in numbers, it doesn't seem to be slowing channels down.

Recommendations/Conclusions:

One of the best recommendations to come out of this dataset would be to strategically post your videos at the peak times, like on Friday, and even doing A/B testing to schedule your videos to post at 5am EST, versus posting at your typical times to see if it would garner more views. The research done for this study is something to be put into practice and tried to see what works best for each individual channel, including new creators trying to figure out where they may best fit in on the platform. Regarding the category they'd chose to start a channel based on the amount of average viewership or nature of trending videos within the category. As discussed earlier in this study, Gaming and Entertainment categories are the 2 most trending based on the number of videos that go trending. But the Music category is the one that garners the greatest number of views on average as well as engagement, including likes and comments.

Another recommendation that may seem obvious is for all creators to actively ask for likes and comments, as there is a clear positive correlation with viewership and engagement on videos. Even though as mentioned earlier these numbers are going down on average based on YouTube's total viewership numbers, they are still very important to get your viewers to do in order to grow your channel.

If we wanted or needed to go deeper into this study, we'd most likely find that in order to grow your channel as well you need to have the unique and grabbing content as well, as you have to have a way to bring in your viewers for the first time, the way to keep them coming back is to actively ask them to like and comment so they will be recommended your videos in the future. There are a lot of topics when it

comes to YouTube, I'd like to expand on a lot further, and I plan to do this in the future, but using the YouTube trending data, I was able to make the above conclusions based on a substantial dataset.

Recommendations for Further Research:

Subscribers' correlation with average views/engagement per video. I'd recommend gathering this information directly from the YouTube API for a future project.

Time watched (or percentage of video watched) based on the length of the video – this information is not included in this dataset – regarding next steps, I'd recommend gathering this information directly from the YouTube API for a future project.

Individual words within video titles and their correlation to average views/engagement – the only way to query this data would be to put it into a relational database, which is what I would recommend taking this data even further.

Individual tags and their correlation to average views/engagement – the only way to query this data would be to put it into a relational database, which is what I would recommend taking this data even further.

Using machine learning to read the words within the pictures in the thumbnail and their correlation to views/engagement, as this metric would mainly be gathered manually, it seems like machine learning would be a way to utilize this metric as well.

Appendix - Queries/Sources:

- Used excel solely for all calculations/queries/pivot tables/vlookup's. Linked along with this on GitHub.
- Link to source dataset from Kaggle (source is pulling information directly from Youtube API):
    - https://www.kaggle.com/datasets/datasnaek/youtube-new