

Youtube Trending and Channel Data Sets Analysis

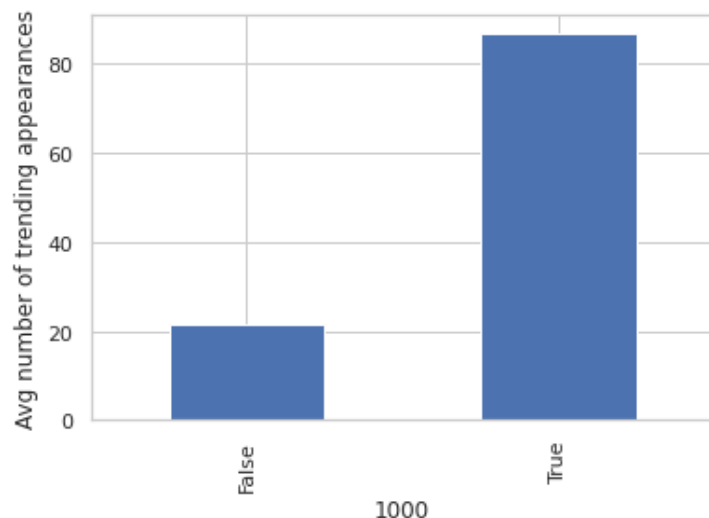
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Does being a top 1000 Youtube Channel help their videos be on trending more frequently?

One interesting insight that I found was that the top 5 most subscribed youtube channels had 0 trending appearances within the past 2 years combined.

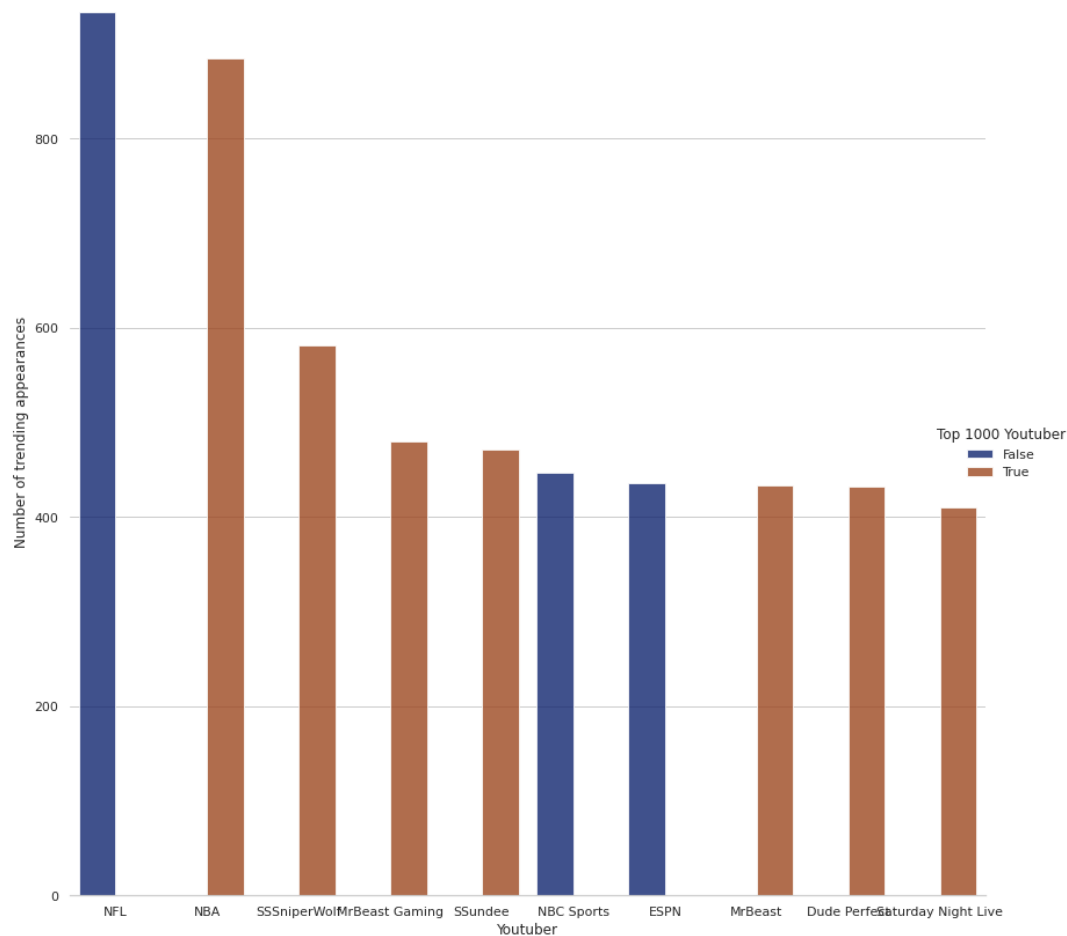
While some of the top 1000 subscribed channels had a large amount of videos in trending, the majority of them actually never had a video trend. In fact only 285 of the top 1000 youtubers have ever had a video trend.

However, the channels that are in the top 1000 that do have videos in trending, tend to have more videos that trend than channels that are not in the top 1000. The mean of the top 1000 channel that has trending videos has 86.6 videos that have been in trending, whereas the channels that are not in the top 1000 only have on average 21.5.



While 95.7% of the channels are not in the top 1000, they only comprise 84.05% of the total videos. This means that the channels in the top 1000 have many more trending videos per channel than the ones not in the top 1000.

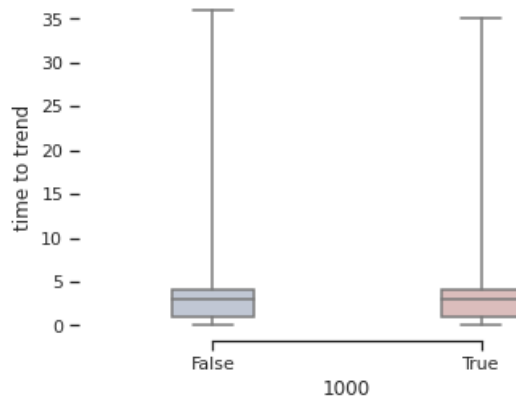
The following graph displays the youtube channels with the top 10 amount of trending appearances. While the top 1000 youtubers only make up about 4.3% of the number of channels, they comprise 7/10 of the top ten spots. This further proves that the top 1000 youtubers in trending each have many trending videos.



In conclusion, being in the top 1000 list does not guarantee that a channel will have trending videos, however, those that do have trending videos have a lot of them.

How long does it take for a youtube video to trend?

I found that it could take a youtube video from anywhere from 0 - 36 days after it was posted to start trending. This shows that the youtube algorithm cares a lot about relevancy and only promotes videos that are new. The mean for the time it took for a video to reach trending was 3 days and 9 hours. Another insight I found was that there was no significant distinction between how long it took a top 1000 channel's videos to trend and a normal channel's videos to trend.



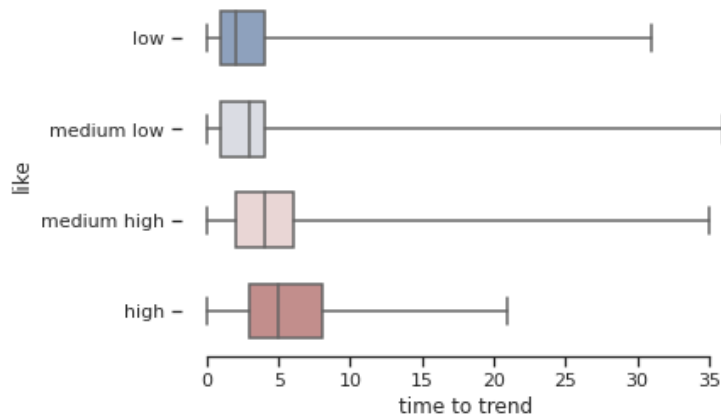
How do likes, comments, and views affect trending?

The number of likes varied widely for videos that trended. All the way from 0, for those who disabled ratings, to 16 million likes on the most liked video, which was BTS Butter Music Video. The average number of likes for a video that trended was 138,785, whereas the median was only 46,628. This means that a lot more videos had a fairly small amount of likes, and the videos with a high number of likes had a disproportionately large amount of likes.

To analyze the data better, I split the videos into 4 categories based on likes. Those with more than 10 million likes were placed in the high category, 1 million to 9.99 million in the medium high, 10 thousand to 999,999 in the medium low, and those below 10 thousand in the low.

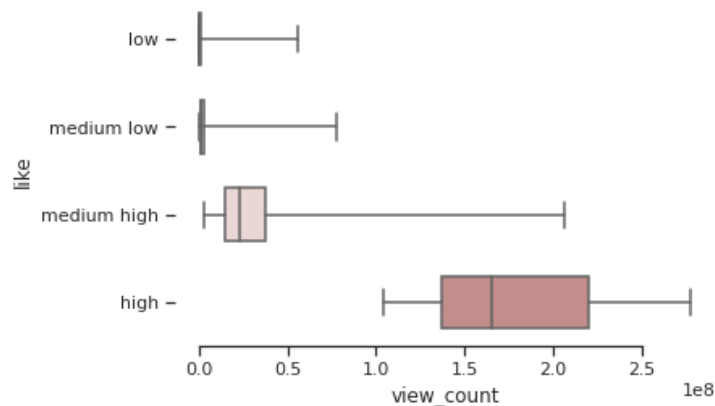
Confirming our belief that more videos lie in the low range of likes, I found that there were 18.5 thousand videos in the low range and 136 thousand in the medium low, while only 3 thousand in the medium high and 56 in the high category.

I wanted to see if the more likes a video had, the quicker it would go viral. However, I found that the opposite was true. The median time it took to trend rose as the like count went up. This is probably due to the fact that the longer it takes for a video to start trending, the more likes it can gather before it is no longer "hot."



The average number of views per video was 2,607,712, whereas the median was only 101,030. I believe this difference is due to a small number of videos having a very high number of views. The smallest number of views on a video that trended was 38510, and the highest was 277,791,741.

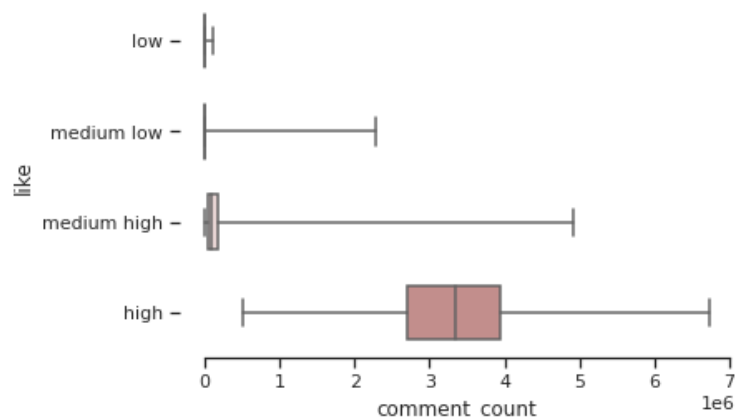
I also wanted to see if like count was correlated with view count. I found that it was highly correlated with view count. In general, those with a high amount of likes had around 160 million views on average, and those with medium high 20 million. This makes sense because in order to have a certain amount of likes, the minimum number of views must equal the number of likes, and usually there are many more views than likes.



For comments, I found again, a huge range between the high and the low. The 2413 videos with comments disabled all had 0 comments, and the video with the most comments had 6738537 comments.

The average number of comments per video was 11640, whereas the median was only 3135. This was very similar to the situation for the likes and view counts, so I assume it is for a similar reason of a few videos having an extraordinarily large number of comments.

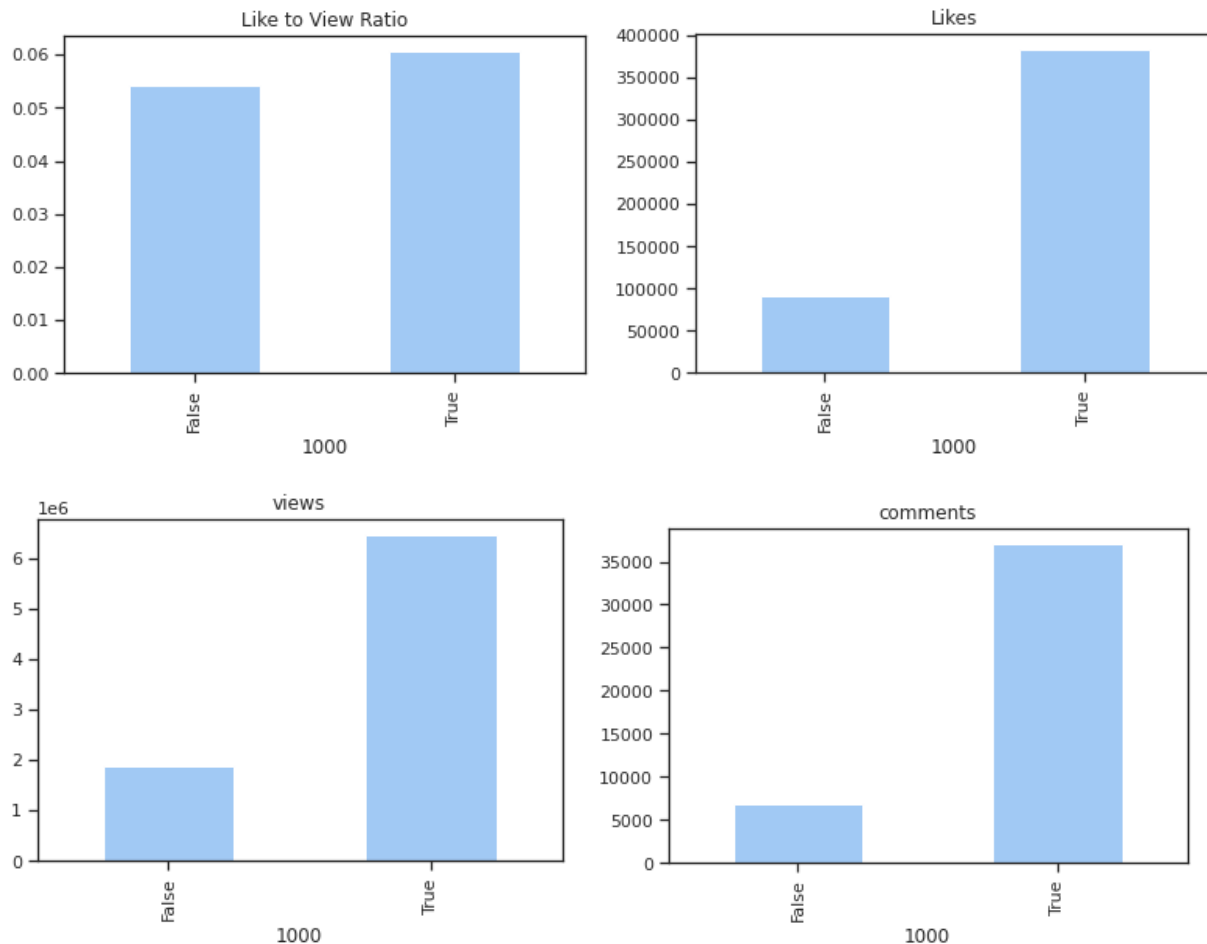
I found that videos with more likes correlated with a larger number of comments too. This aligns with the like to view count situations as well, except the videos with a medium high number of likes didn't have as many comments.



Do Top 1000 Channels Receive More Views, Comments, and Likes?

I wanted to find the ratio of likes to view count, to see if those with more subscribers had a higher ratio of likes. I found that the average ratio for likes to views was 0.055 for the whole dataset. I also found that those who weren't in the top 1000 channels had an average ratio of 0.054, whereas those who were in the top 1000 had a ratio of 0.061. This supports my hypothesis that the channels with a higher number of subscribers were able to garner a higher ratio of likes to their views.

I also found that those in the top 1000 channels had a significantly higher number of views, comments, and likes. The average was 383 thousand likes for the top 1000 and only 91 thousand likes outside the top 1000. The average for views was 6.44 million inside the top 1000, and 1.88 million outside. The average for comments was 37 thousand for inside the top 1000, and 6850 for outside.



Conclusion

The most important insight I found was that only a small percentage (28.5) of the Top 1000 most subscribed youtube channels have ever had a video in trending. However, of these channels that did have videos in trending:

1. The number of videos they had in trending were significantly higher than those outside the top 1000.
2. The number of likes, views, and comments per video were significantly higher than those outside the top 1000.
3. No correlation between having more subscribers and the time it takes for a video to trend.

More interesting insights I found were that the greater the amount of likes a video had, the slower it took to trend. Also, the number of likes, views, and comments were all directly correlated with each other.