

# Youtube Video & Channel Data Analysis

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## Introduction

In this generation, people spend more time on watching Youtube videos. Youtuber has become one of the most popular career choice for young citizens. If a teenager loves to watch entertainment type of videos, such as PewDiePie and Logan Paul, he may dream of becoming a top-ranking Youtuber who films entertainment videos. This raised some research questions:

- Is filming entertainment channel a valuable decision for him/her?
- If he/she reach the goal and become the top-ranking Youtuber, what is the condition he/she must know.

## Hypotheses

### Part 1

- Entertainment videos will likely to trend more than other types of videos such as comedy, music, fashion, knowledge, and etc
- Among top-ranking Youtuber, it will be more profitable to operate the entertainment type channel than other types of channel such as comedy, music, fashion, knowledge

### Part 2

- Top U.S. Youtubers will have more trending videos than other Youtube channels
- If you own a top-ranking Youtube channel in the U.S., you can make a big profit

## Method

### Web Crawler

This web crawler collects the top 250 US Youtube channel information from SocialBlade.com based on the rankings of socialblade grades, total subscribers and total video views.

### Trending Video Analysis

This analysis provides the information of the channels or video categories that have the most trending videos.

### Top Ranking YouTube Channel Analysis

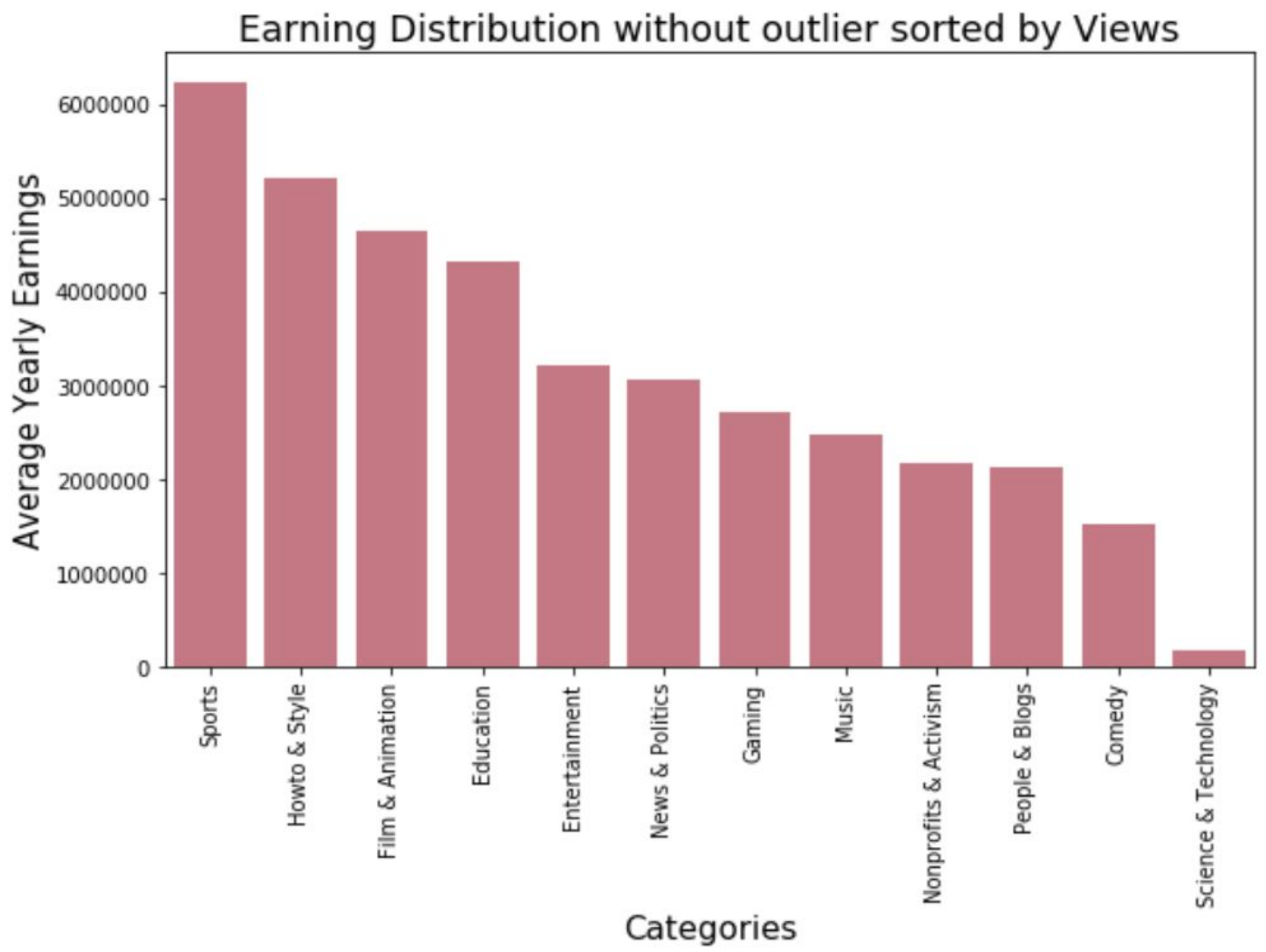
This analysis analyze the information of Top 250 US YouTubers based on the number of subscribers or number of views, which gives insights of the profit the top Youtubers can earn.

## Result 1

- Entertainment videos have the most trending videos in the data captured period, music, Howto, comedy are other types that have the most trending videos.
- When we look at the average views, likes, comments counts and time to trend, music, entertainment, gaming, film & animation, nonprofits & activism videos have higher values than other categories.
- This shows that entertainment videos is one of the video type that audiences like to watch.

	Avg Views	Avg Likes(%)	Avg Comment Count	Avg Days Spent to Trend
category_name				
Entertainment	2.06788e+06	0.925044	7383.23	13.01
Music	6.201e+06	0.965137	19359.8	14.72
Howto & Style	983730	0.967486	5583.59	7.91
Comedy	1.48031e+06	0.96766	6521.72	10.11
People & Blogs	1.53184e+06	0.948233	7719.01	15.69
News & Politics	592588	0.812815	2428.4	18.58
Science & Technology	1.45263e+06	0.947768	4993.72	18.16
Film & Animation	3.10625e+06	0.964694	7627.74	41.06
Sports	2.02597e+06	0.950522	5148.19	23.46
Education	712941	0.973286	3286.38	37.96
Pets & Animals	831143	0.973496	2892.07	7.72
Gaming	2.62083e+06	0.882586	18042.5	21.95
Travel & Events	854620	0.934238	2267.44	7.06
Autos & Vehicles	1.35597e+06	0.945861	2042.83	43.21
Nonprofits & Activism	2.96388e+06	0.817369	84364.9	5.39
Shows	903527	0.977864	1668.72	10.72

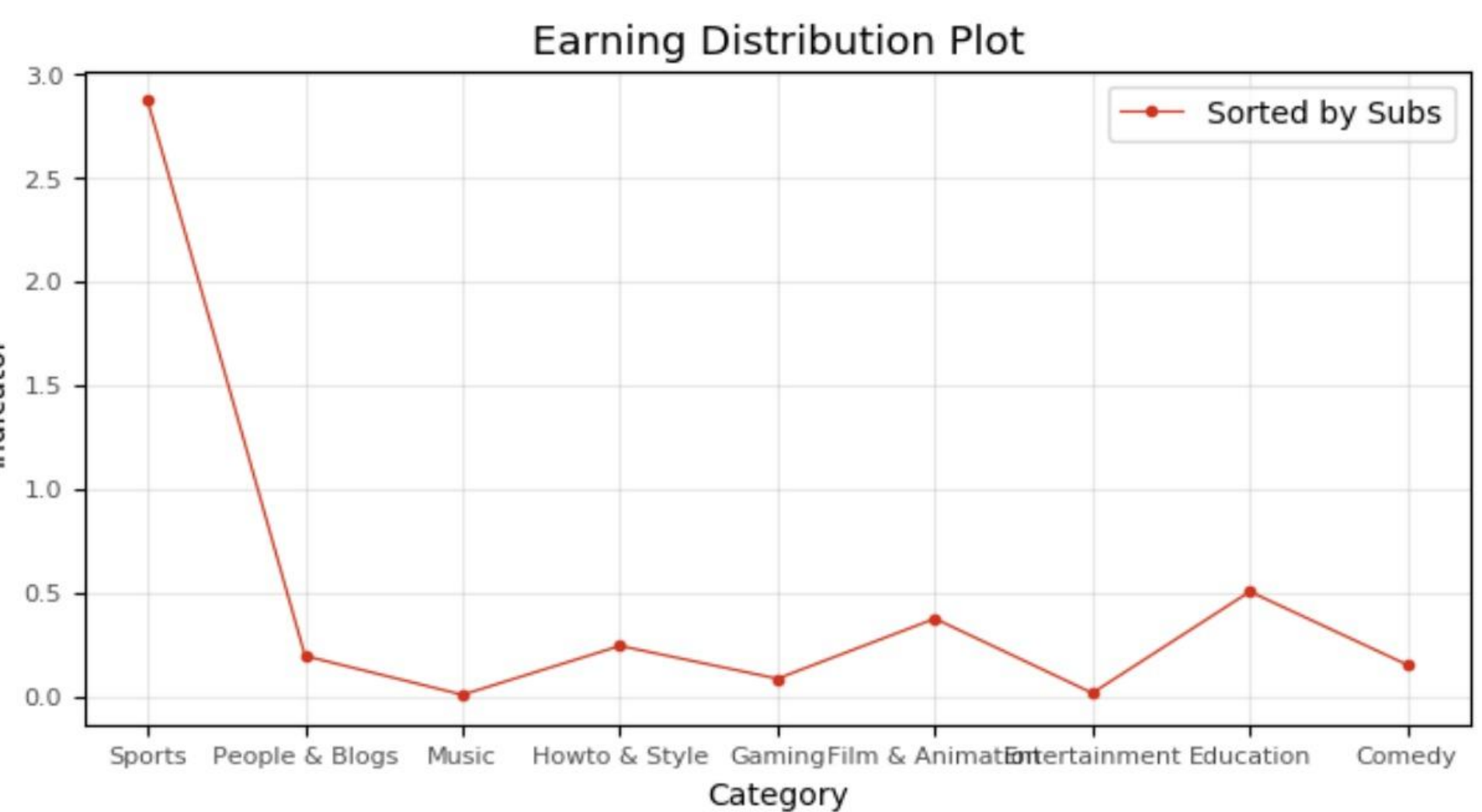
- 65 entertainment Youtube channel entered Top 250.
- Some of the channels earn much more money than others, while some are lower than average. It has a large gap which makes the average earnings not as high as expected.
- "Entertainment" type Youtube channel earning varies among the channels. It is very competitive to become the Top YouTubers in this category.



## Results 2

- Top 250 US YouTubers, which is 0.001% of the total YouTubers in the world, account for 15% of the trending videos in the given period.
- A top-ranking Youtuber earns 20 times of the SDE salary.
- We come up with an formula to obtain the concept of earning distribution of top-ranking videos. The more the indicator is, the more earning gap there will be.

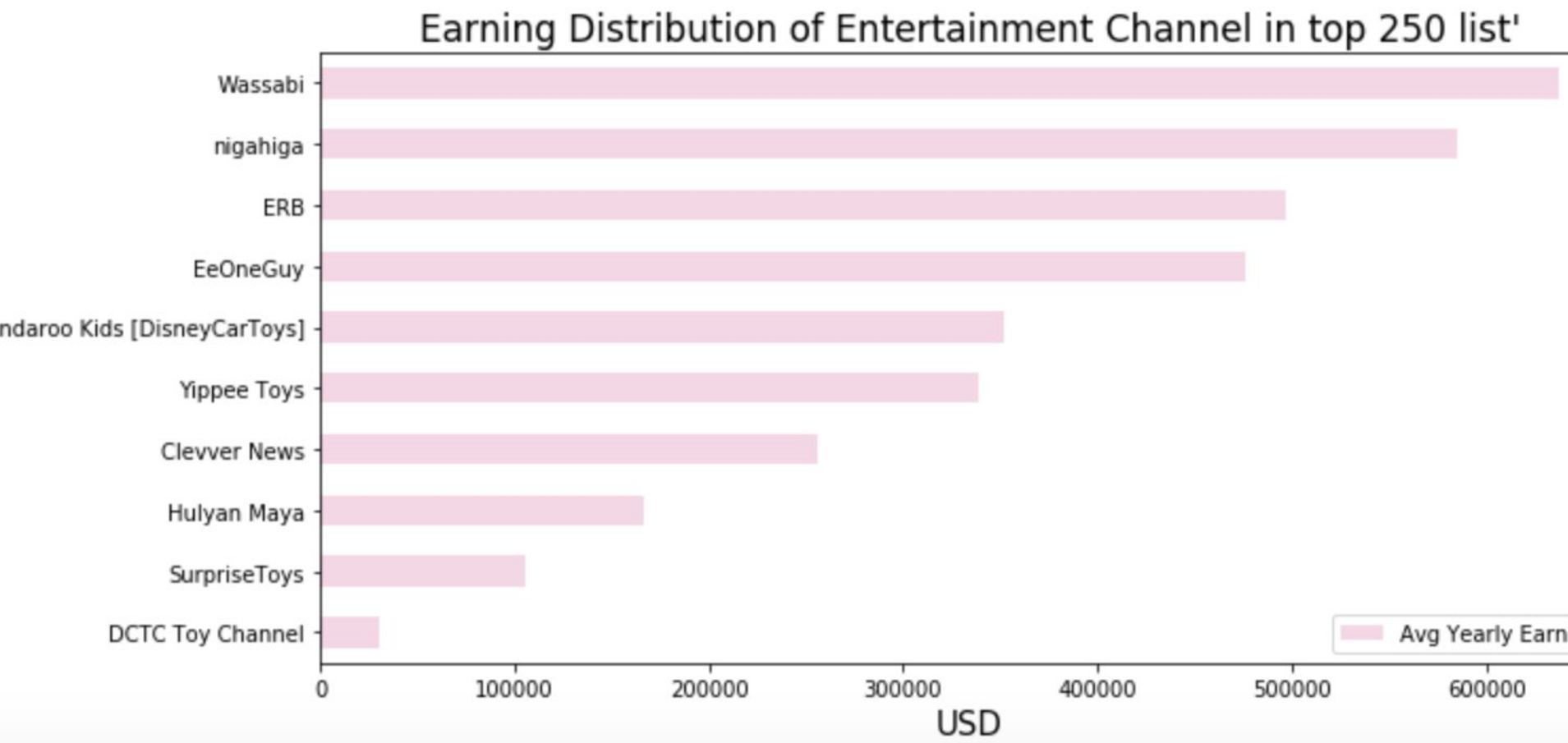
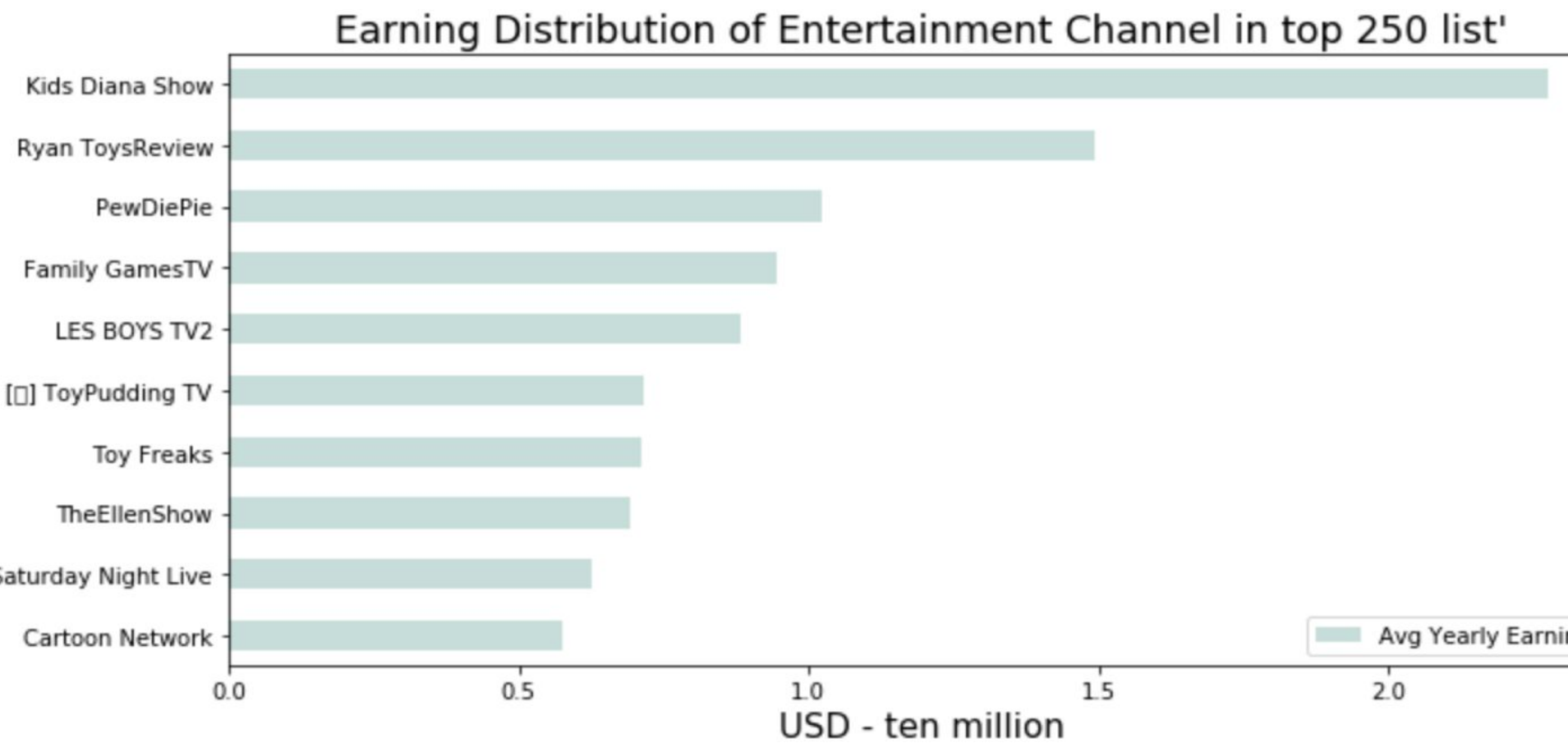
$$TOP\ Youtube\ channel\ earning\ percentage = \frac{Earning\ of\ TOP\ Youtube\ channel}{Earning\ of\ Youtube\ channel}$$
$$TOP\ Youtube\ channel\ percentage = \frac{Amount\ of\ TOP\ Youtube\ channel}{Amount\ of\ Youtube\ channel}$$
$$Earning\ Distribution\ Indicator = \frac{TOP\ Youtube\ channel\ earning\ percentage}{TOP\ Youtube\ channel\ percentage}$$



The plot shows that Sports category has the largest indicator value and we might draw the conclusion that the earning distribution in Sports category channel is more unequal than others.

- If you want to earn more money and become successful in this career, you need to keep your channel active and attracting to the audience by uploading the videos frequently.

## Result 1



## Summary

### Measurements of whether a Youtube channel is successful

- Amount of money they earned per uploads
- Number of subscribers
- Number of video views
- Number of trending videos
- Category type

### Possible factors to become a successful Youtuber

- Appropriate channel types
- Many subscribers and video views
- Many trending videos

## Conclusion

This analysis shows that entertainment videos are one of the most popular types for Youtube viewers. However, it is also pretty competitive to make the big profit by filming entertainment type videos since there are large amount of entertainment channels in YouTube now.

Top-ranking Youtuber are extremely rich. However, only a few people can hit the high rank and their channels includes disproportionate trending videos. On top, the earning distribution of top-ranking Youtubers is strongly right skewed, which shows a large earning gap even in the top rank.

## Limitation

- The dataset only includes 8 month data, we may need a larger time period data to have a better analysis
- This dataset only includes Top 250 Youtube channel, which may be hard for generalization analysis

## Future Work

- We can collect not only the Top ranking YouTube channel information, but also the channel information that are not included in the chart for a more in-depth comparison between the well-known YouTubers and other normal YouTubers