K-pop Phenomenon On YouTube:

US YouTube Trending Videos Data Analysis and Storytelling

This report examines K-pop videos' performance on the YouTube US Trending Page. The focus is on K-pop-related descriptive, correlational and distributive analysis.

The overall rendered notebook with outputs can be founded here :
https://nbviewer.org/github/zhouhe018/damg6105/blob/main/Team%206_Code.ipynb

Question 1	**Are K-pop videos the all-rouder top-ranker?** ● Which videos rank top according to the number of views, likes, comments and times of appearance on the trending page? ● What are the correlations between these rankings?	

Analysis	*Main Operations*	`pandas.DataFrame.sort_values`
		`pandas.DataFrame.value_counts`
		`numpy.corrcoef`
		`seaborn.heatmap`

	Outputs	● Ranking of Top 5 Most-viewed / Most-liked / Most-commented / Most-frequently-trending Trending Videos ● Correlation heatmap
Conclusion	**K-pop trending videos are top-rankers, but not on all levels.** ● They top the rankings in terms of the number of views, likes and comments; however, they are not outstanding in the ranking of trending frequency. ● The variables of views, likes and comments are strongly correlated, while the trending frequency has a very weak correlation with the other three indicators.	

Question 2	**Are K-pop related channels also popular in the U.S. region?** ● Which channels have a large number of trending videos? ● Select a K-pop channel to analyze the time it takes for its videos to be posted to the Youtube trending.	

Analysis	*Main Operations*	`pandas.DataFrame.sort_values`
		`pandas.DataFrame.value_counts`
		`seaborn.histplot`

	Outputs	● Find the top 20 Youtube channels, according to the number of trending videos. ● Sort the BLACKPINK's videos according to the number of trending days from lowest to highest and draw a bar graph.
Conclusion	**Only a small percentage of Kpop-related channels in the U.S. remain popular.** ● A small number of Kpop channels such as: SMTOWN and BLACKPINK are popular in the U.S. region. ● The polarization is serious, a small number of kpop channels are very popular, most of the videos can be on trending within four days, and other kpop channels are unattended.	

Question 3	**Are K-pop released dates and popularity related to the months**? ● Which month has the most videos in all category channels, in only music channels, and in a certain K-pop group channel? ● Is every video in one month by one group as popular as others? How to measure the popularity of a video?	

Analysis	*Main Operations*	`pandas.DataFrame.sort_values`
		 `pandas.DataFrame.value_counts`
		 `pandas.DataFrame.columns`
		 `seaborn.barplot`
		 `seaborn.catplot`

	Outputs	● The rank of month of the first half year of 2021 in terms of released counts in all categories, music channel, and BLACKPINK channel. ● The HeatIndex of all the videos released by BLACKPINK in one certain month, and compare the relationship with the month and HeatIndex.
Conclusion	**The amount of K-pop videos uploaded is partly related to the month, while the HeatIndex is not.** ● YouTuber uploaders like to post videos in June. Music uploaders prefer to post videos in May, and BLACKPINK prefer to post videos in April in terms of data for the first half 2021. ● The Heat Index of videos uploaded by the same uploader and month is quite different. The gap between the most and the least popular can reach about 10 times.	