

Data Analysis Songs Power BI Project

By
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Introduction

- ❑ This project is talking about the analysis of YouTube songs and user engagements.
- ❑ I used MS Power BI visualizations to conduct a comprehensive analysis of YouTube songs to gain insights and make informed decisions.
- ❑ These Power BI analysis help to know about the trends, customers preferences, and user engagement.
- ❑ Power BI reports will aid the content creators and stakeholders to improve their YouTube video songs content.

Data Cleaning and Preparation

- ❑ Open MS Power BI.
- ❑ Transform data as CSV file .
- ❑ Clean and preprocess the dataset, activate column quality and column distribution.
- ❑ Evaluate the whole columns and handling missing values or outliers, distinct by remove duplicates, and missing null.
- ❑ Split and convert relevant columns to appropriate data types like numerical, text, date/time, ...etc.
- ❑ Starting analysing by using the following 5 steps.

➤ 1- Understanding the Dataset

Dataset Description:

1. Video _ id: Unique identifier for each YouTube video.
2. Channel Title: Title of the YouTube channel publishing the song.
3. title: Title of the YouTube song video.
4. description: Description provided for the YouTube song video.
5. tags: Tags associated with the YouTube song video
6. Published At: Date and time when the YouTube song video was published.
7. View Count: Number of views received by the YouTube song video.
8. Like Count: Number of likes received by the YouTube song video.
9. Favorite Count: Number of times the YouTube song video has been marked as a favorite.
10. Comment Count: Number of comments posted on the YouTube song video.
11. duration: Duration of the YouTube song video.
12. definition: Video definition or quality (e.g., HD, SD).
13. caption: Availability of captions for the YouTube song video.

➤ 2. Exploratory Data Analysis (EDA)

- Explore patterns and distributions in view counts, like counts, and comments.
- Identify trends in the popularity and engagement of YouTube song videos.

➤ 3. Content and Channel Analysis:

- Analyze the distribution of videos across different channels.
- Identify popular tags and their correlation with view counts.

➤ 4. Temporal Trends:

- Explore how YouTube song video metrics vary over time.
- Identify peak publishing times and their impact on engagement.

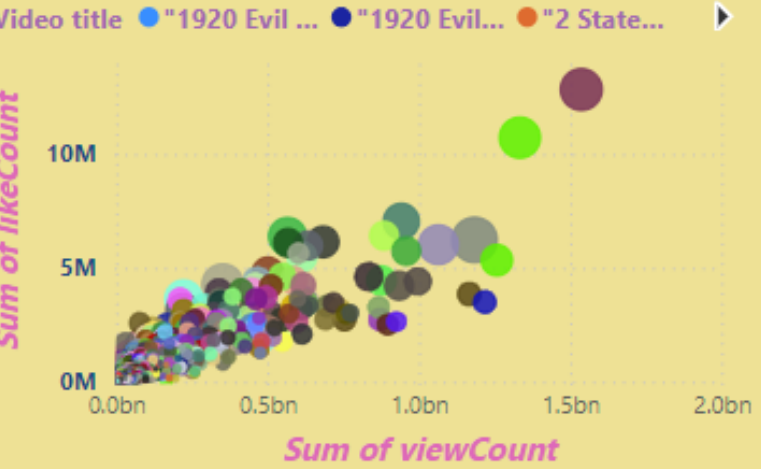
➤ 5. User Engagement Insights:

- Investigate relationships between likes, comments, and views.
- Identify factors influencing user engagement with YouTube song videos.

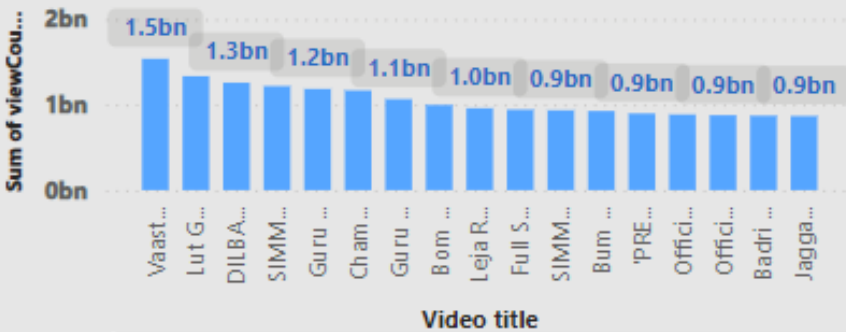
. Explore patterns and distributions in view counts, like counts, and comments.



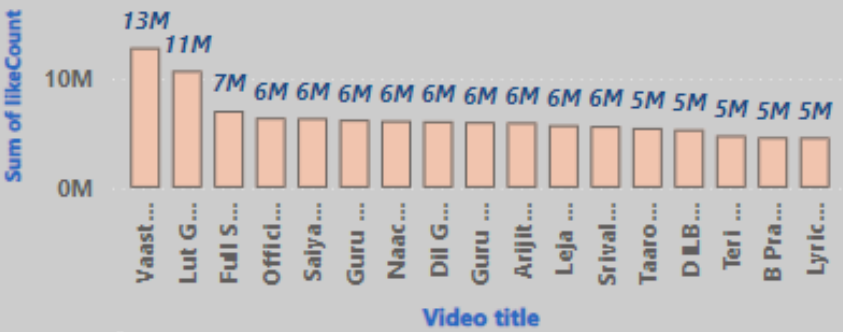
Sum of viewCount, Sum of likeCount and Sum of commentCount by channelTitle and Video title



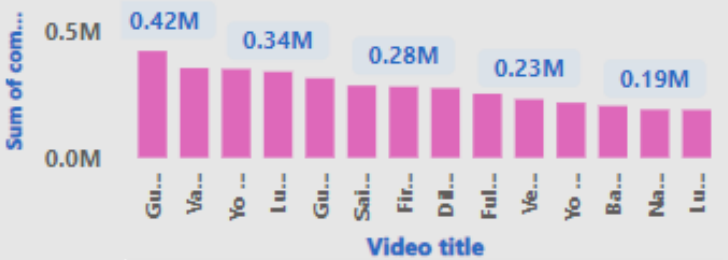
Sum of viewCount by video title



Sum of likeCount by video title

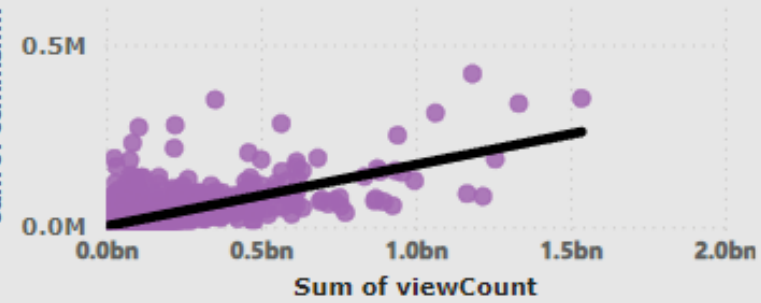


Sum of commentCount by video title

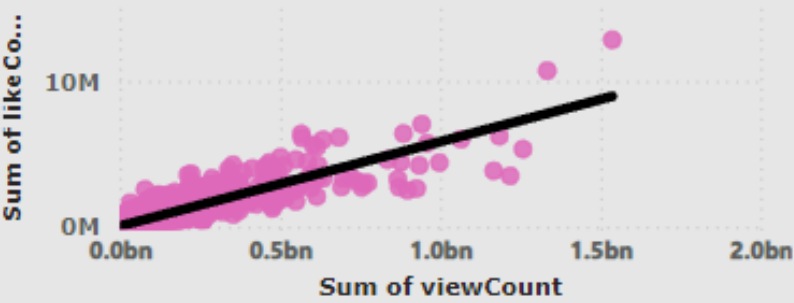


. Identify trends in the popularity and engagement of YouTube song videos.

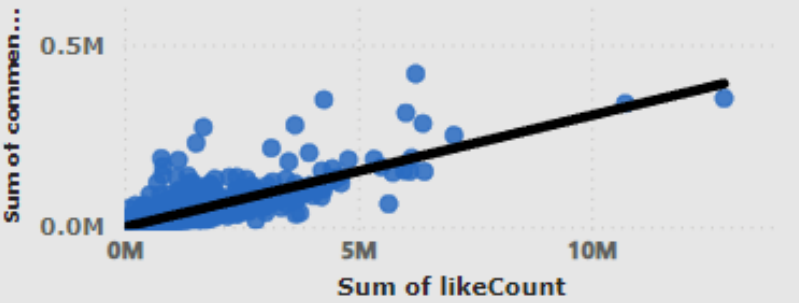
Sum of viewCount and Sum of commentCount by Video title



Sum of viewCount and Sum of likeCount by Video title

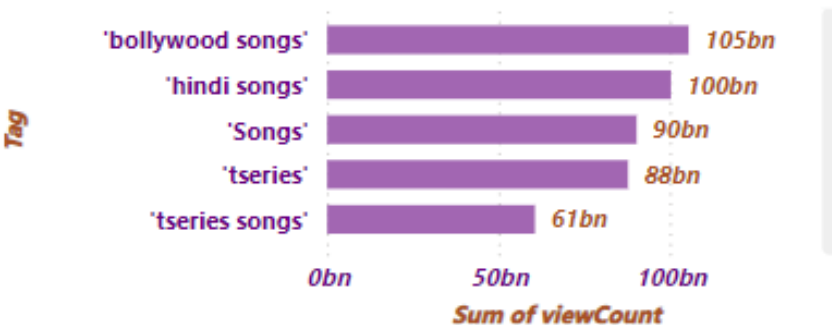


Sum of likeCount and Sum of commentCount by Video title

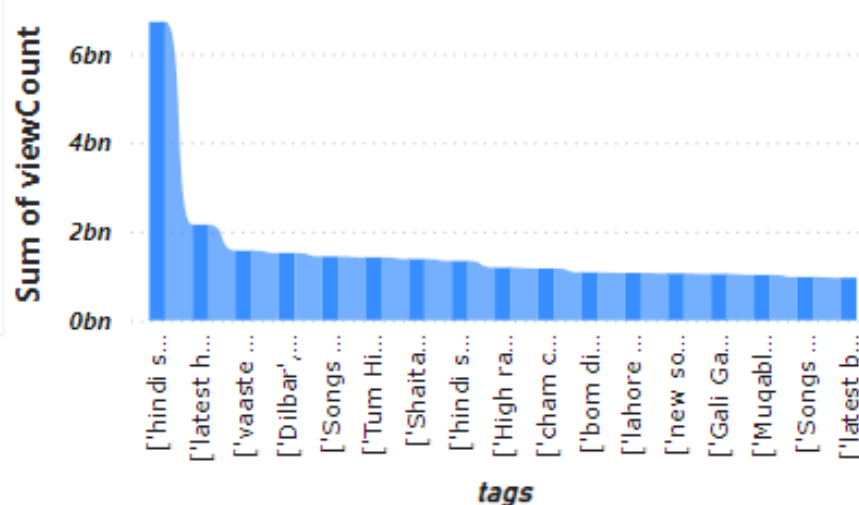


- Analyze the distribution of videos across different channels.
- Identify popular tags and their correlation with view counts.

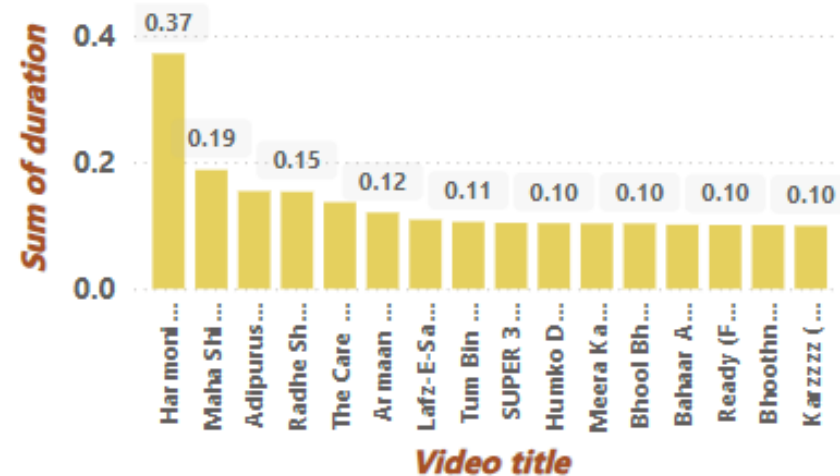
Sum of viewCount by Tag



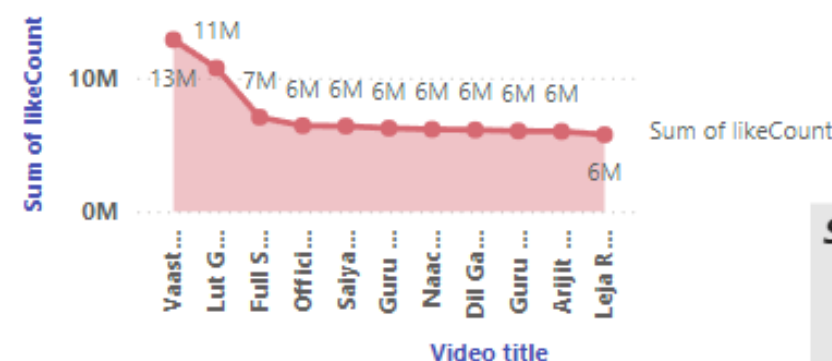
Sum of viewCount by tags



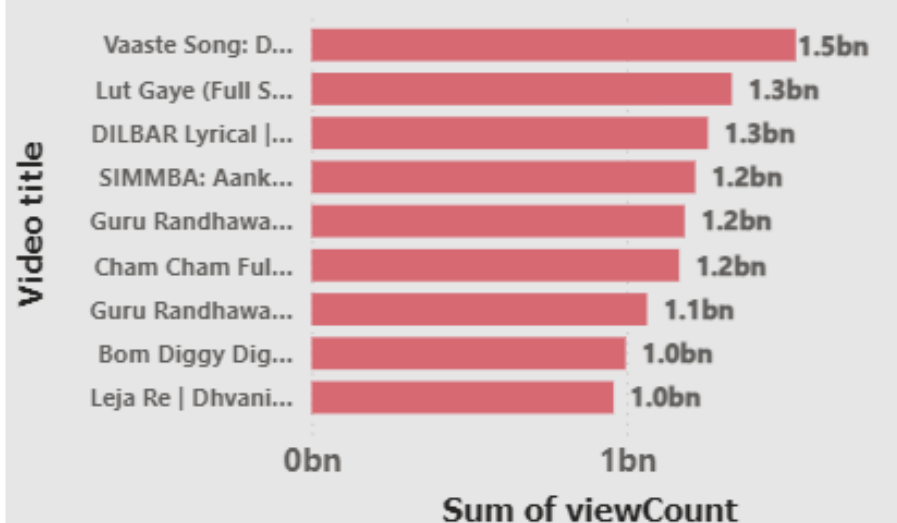
Sum of duration by Video title



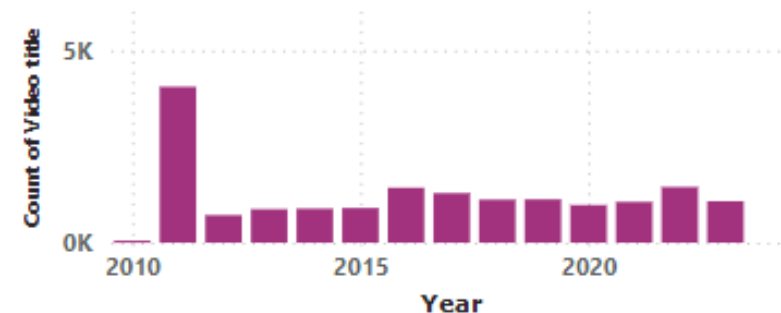
Sum of like Count by Video title



Sum of view Count by Video title



Count of Video title by Year



Help Q&A understand p...
Add synonyms now

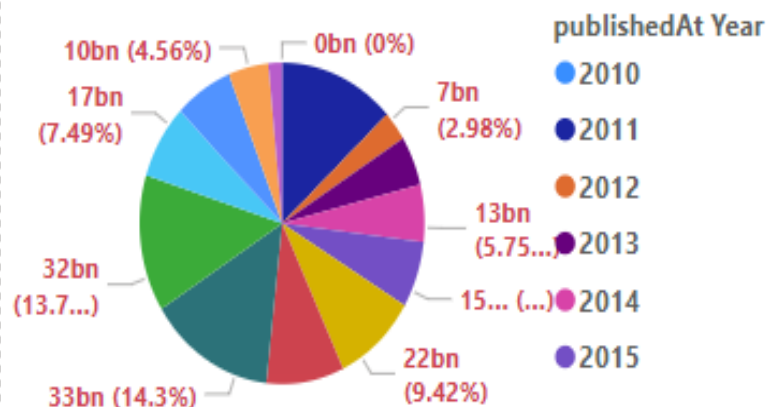
most recent song

Showing results for Latest song by song published at

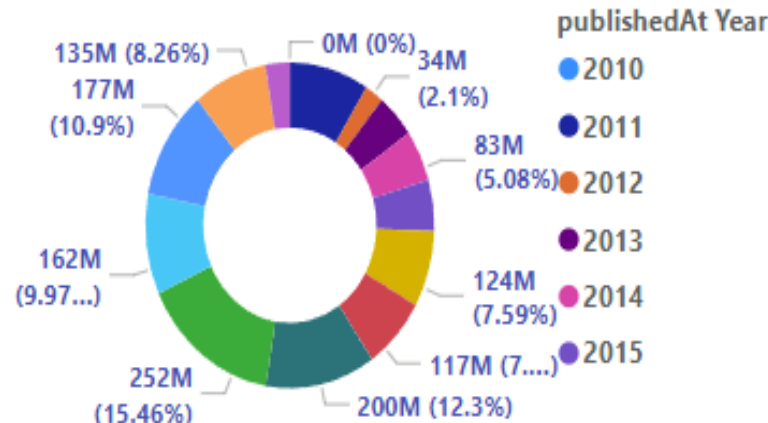
Column1	video_id	channelTitle	Video title
0	F44TK5EHCro	T-Series	RAFTA RAFTA (Lo-Fi Soulful KK Lo-Fi Mix

- Explore how YouTube song video metrics vary over time.
- Identify peak publishing times and their impact on engagement.

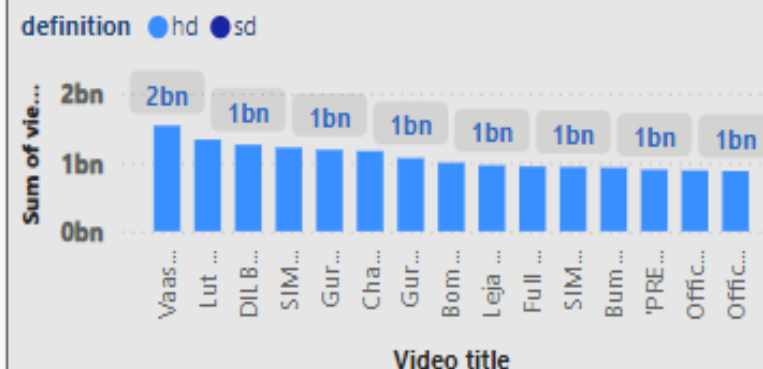
Sum of view Count by Year



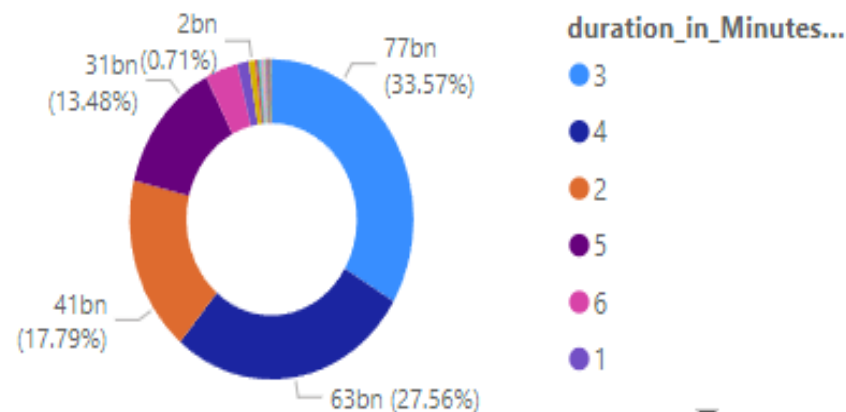
Sum of likeCount by Year



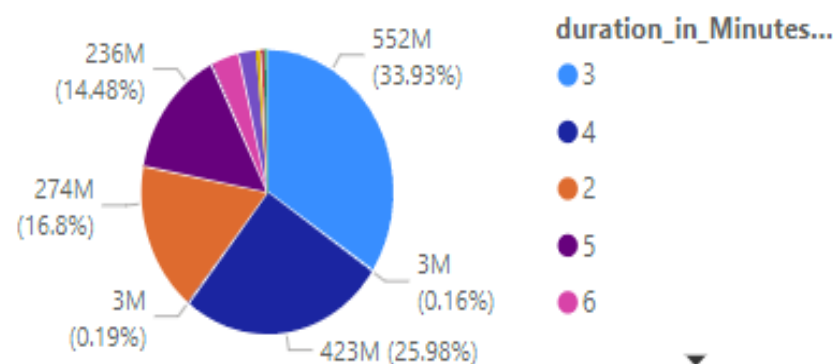
Sum of viewCount by video title



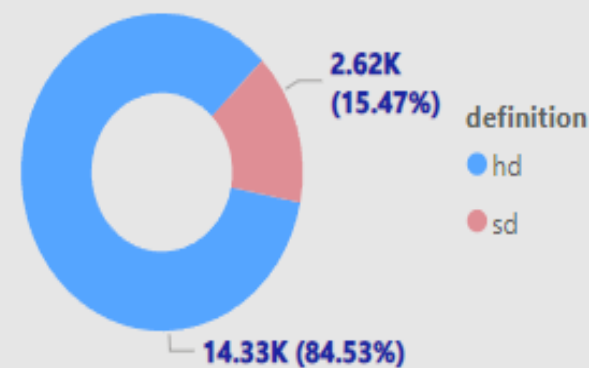
Sum of viewCount by duration_in_Minutes.1



Sum of likeCount by duration_in_Minutes.1 and definition



Count of Video title by definition



User Engagement Insights:

- ❑ The number of likes and comments has a direct relationship with number of views.
- ❑ 2018 and 2019 has the highest number of views and 2022 and 2023 has the lowest number of views.
- ❑ There are 2 main factors affects the number of views, the video definition and the song video duration as the users like to view songs with HD or high definitions and prefer duration between 3 and 4 minutes.
- ❑ The lowest number of views was for videos with duration more than 6 min. and with SD or low definition.
- ❑ The best song video is "**VAASTE SONG**", it has the highest number of views 1.5bn likes 13M, and comments 0.42M. It was at 2019 with 4 min duration It was HD video as well.
- ❑ Tags have a direct or positive correlation with the view counts .

Conclusion

❖ Data Analytics recommendations

- ❑ 2018 and 2019 has the highest number of views and 2022 and 2023 has the lowest number of views. The reasons should be investigated and solved by stakeholders. Mostly it is related to the marketing activates and type of video songs trends.
- ❑ The stakeholders and content creators should consider to always create a HD video songs and 3-4 minutes duration by maximum.
- ❑ The best song video is "VAASTE SONG". The video song content creators should study this song and could make a survey with different customers segments to know why they love this video song and improve the next songs production accordingly.
- ❑ The "Bollywood songs" tag has the highest view counts.

Thank You