Comprehensive Analysis of YouTube Songs Data

USING POWER BI

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OVERVIEW:

This internship project focuses on analyzing YouTube songs data using Power BI to uncover trends, preferences, and patterns. The insights derived aim to help content creators and stakeholders optimize their YouTube song content for better performance and user engagement

DATASET DESCRIPTION:

- **video_id:** Unique identifier for each YouTube video.
- **channelTitle:** Title of the YouTube channel publishing the song.
- **title:** Title of the YouTube song video.
- **description:** Description provided for the YouTube song video.
- **tags:** Tags associated with the YouTube song video.
- **publishedAt:** Date and time when the YouTube song video was published.
- **viewCount:** Number of views received by the YouTube song video.
- **likeCount:** Number of likes received by the YouTube song video.
- **favoriteCount:** Number of times the YouTube song video has been marked as a favorite.
- **commentCount:** Number of comments posted on the YouTube song video.
- **duration:** Duration of the YouTube song video.
- **definition:** Video definition or quality (e.g., HD, SD).
- **caption:** Availability of captions for the YouTube song video.
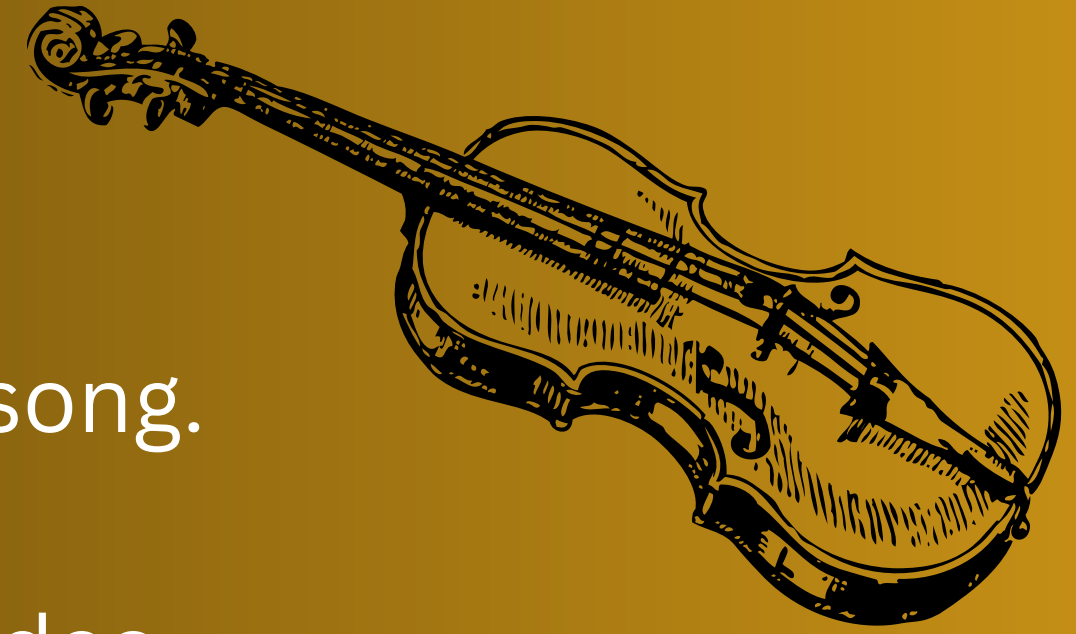
OBJECTIVES:

DATA CLEANING AND PREPARATION :
- HANDLE MISSING VALUES AND OUTLIERS.
- CONVERT COLUMNS TO APPROPRIATE DATA TYPES

1

EXPLORATORY DATA ANALYSIS (EDA):
- ANALYZE VIEW COUNTS, LIKES. AND COMMENTS.
- IDENTIFY POPULARITY AND ENGAGEMENT TRENDS.

2

CONTENT AND CHANNEL ANALYSIS:
- EXAMINE VIDEO DISTRIBUTION ACROSS CHANNELS.
- CORRELATE POPULAR TAGS WITH VIEW COUNTS.

3

TEMPORAL TRENDS:
- ASSESS HOW METRICS VARY OVER TIME.
- IDENTIFY PEAK PUBLISHING TIMES AND THEIR IMPACT

4

USER ENGAGEMENT INSIGHTS:
- EXPLORE RELATIONSHIPS BETWEEN LIKES, COMMENTS. AND VIEWS
- DETERMINE FACTORS INFLUENCING USER ENGAGEMENT.

5

YouTube Songs Analysis

All ▼

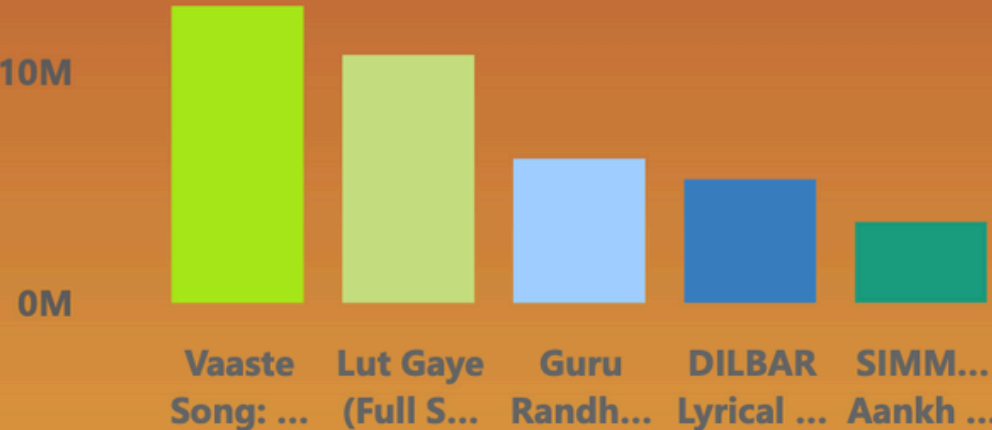| Avg Likes	Avg Views	Avg Comment	Total likes	Total Views
87.18K	11.94M	2.64K	2bn	231bn

Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4

Top 5 Song by Likes

10M
0M

Vaaste Song: ... | Lut Gaye (Full S... | Guru Randh... | DILBAR Lyrical ... | SIMM... Aankh ...

Top 5 Songs by Views

2bn
1bn
0bn

Vaaste Song: Dhvani Bha... | Lut Gaye (Full Song) Emra... | DILBAR Lyrical | Sat... | SIMMBA: Aankh Mare... | Guru Randhawa: ...

Total Likes, Comments and Views

0.72%

99.25%

● Sum of likeC... ● Sum of co... ● Sum of vie...

Music by Quality

2.76K (14.28%)

16.58K (85.72%)

● hd ● sd
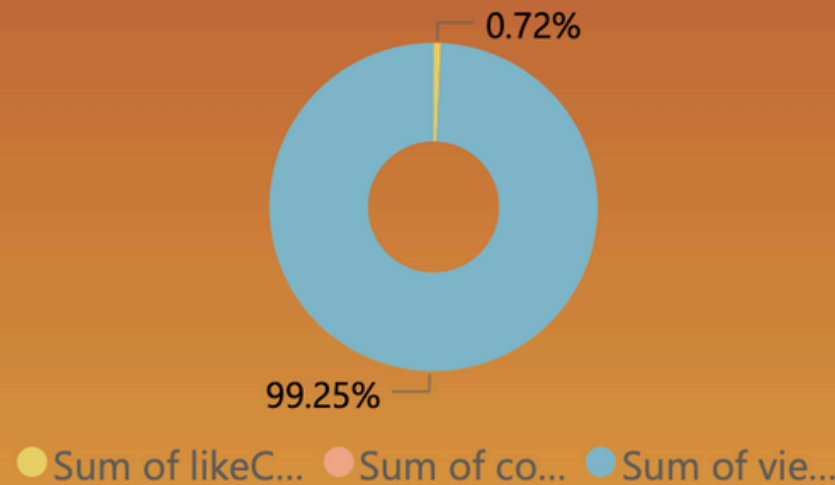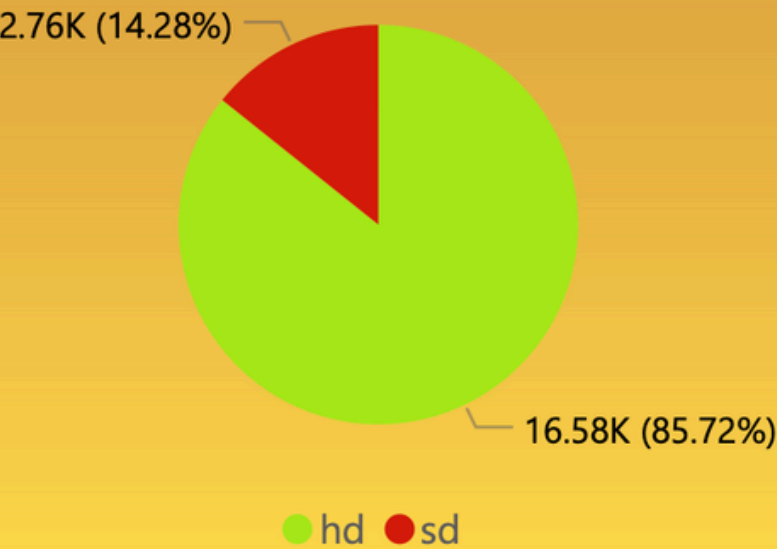
Annual Songs Release Trend

100M

50M

0M

2010   2012   2014   2016   2018   2020   2022
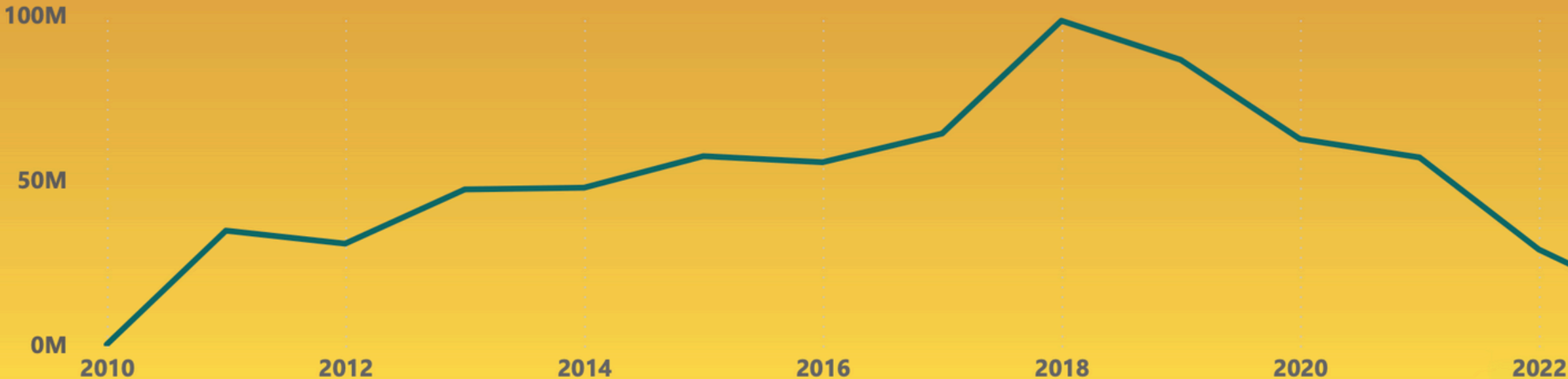
INSIGHTS :

- "Vaaste Song: Dhvani Bhanushali" leads in both views and likes, indicating high popularity and engagement.

- HD videos dominate with 85.72% preference, highlighting the importance of producing high-quality content.

- Engagement breakdown shows 99.25% of interactions are views, with likes and comments making up a small fraction.

- Annual song releases peaked in 2018, followed by a decline, suggesting a need for a revised content strategy.

- Average Metrics: 87.18K likes, 11.94M views, and 2.64K comments per song, showcasing significant viewer interaction.

RECOMMENDATIONS:

- **Focus on HD Content: Given the high preference for HD quality (85.72%), continue producing and promoting HD videos.**

- **Capitalize on Popular Songs: "Vaaste Song" and "Lut Gaye" are leading in both likes and views. Analyze what made these songs successful and apply similar strategies to future content.**

- **Enhance Engagement: Although views dominate, likes and comments are relatively low. Implement strategies to encourage viewers to like and comment, such as interactive features and direct call-to-actions within videos.**

- **Investigate Decline in Releases: The decline in song releases post-2018 needs attention. Analyze market trends, audience preferences, and other factors to revitalize the content release strategy.**

- **Seasonal Release Strategies: Consider timing the release of new content around peak periods identified in the trend analysis to maximize engagement.**