

Visualization 1: Top Performing YouTube Categories (Worksheet)

(A.) Which video categories generate the highest number of views?

To address this question, we examined the performance of YouTube video categories regarding total views. Specifically, the analysis will help identify which categories are the most popular on the platform.

In Figure 1, we have created a donut chart using data from “YouTube Data” (n.d.) containing YouTube video categories and total view counts. We used a donut chart versus a pie chart because the center removed in a donut chart helps the reader focus on the length of the arc for comparison versus the area of a pie slice may be confusing. The color schematic was the default color palette in Tableau to encompass all categories. We adopted a calculated field to extract data only from the last trending date so as not to overestimate calculations (*see notes section*).

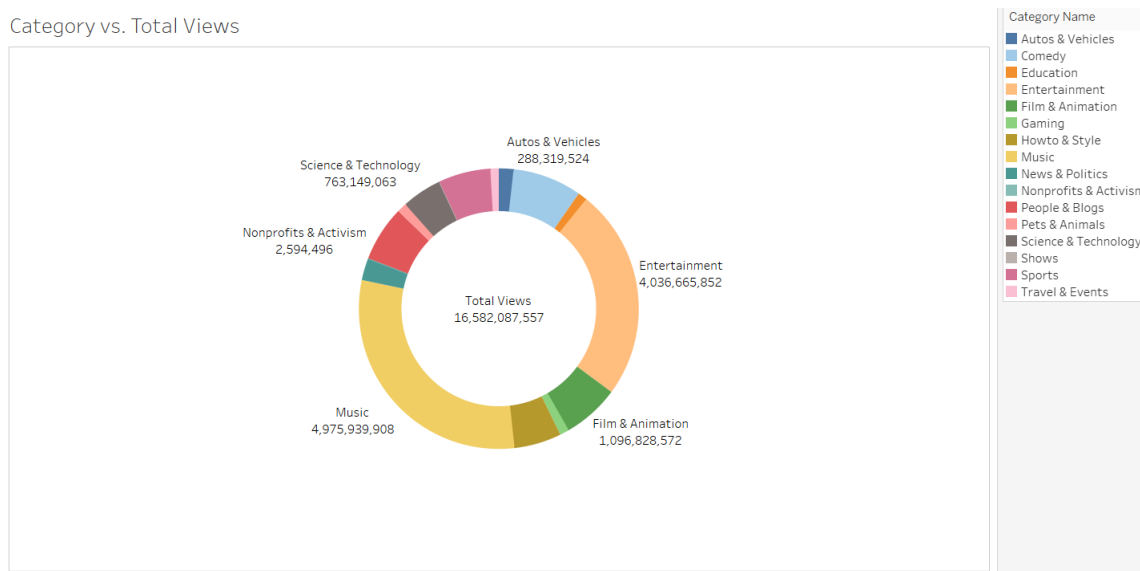


Figure 1: Donut chart of the top 16 categories with total views on YouTube.

The data reveals a clear dominance of two major categories standing out. As shown in Figure 1, the “Music” category leads, amassing nearly 5 billion views, while “Entertainment” follows closely with just over 4 billion views. These two categories have captured the attention of audiences on a massive scale, significantly outpacing other types of content.

Diving deeper, we see a mid-tier of categories that also draw substantial viewership. “Comedy”, “Film & Animation”, “People & Blogs”, and “Sports” all range between 1 and 1.4 billion views, showcasing strong, though less dominant, audience engagement. Below them, “Howto & Style” still maintains a notable presence with over 900 million views, and “Science & Technology” follows closely with around 750 million views.

However, as we move into more niche categories, the viewership starts to drop significantly. “Gaming”, “Education”, and other smaller segments struggle to reach the same level of visibility, with all of them garnering fewer than 500 million views. At the bottom of the spectrum are “Nonprofits & Activism” and “Shows”, which demonstrate the least popularity, drawing in fewer than 3 million views. This stark contrast in engagement across categories highlights a clear divide in audience interest, with mainstream entertainment continuing to dominate the platform, while niche content struggles to capture a large share of views.

This indicates that entertainment-focused categories dominate in terms of total viewership on YouTube. This reveals that content creators and marketers who aim to maximize reach and viewership should consider producing content within these categories or finding ways to make educational or niche content more engaging to a wider audience.

[Donut Chart: Categories vs. Total Views](#)

Visualization 2: YouTube View Trends (Worksheet)

(B.) What have been the viewership trends for YouTube over the past 10 years?

The goal of this analysis is to examine the performance of YouTube categories over ten years and how have these categories grown or declined in popularity during that period.

To address this question, we used a dataset, “YouTube Data” (n.d.), containing YouTube video categories, views, and trending dates. The primary focus was on a ten-year period, specifically 2013 to 2023. I fit a line chart to display viewership trends that included total views and each year. This best presents where popularity grew or declined and best examines if other categories have dominated in certain years. We used the same color scheme for the categories as for the previous visualization. We included a filter for categories for the reader to drill down or compare specific categories if they wish.

Over the past decade, “Music” has dominated YouTube viewership, peaking in 2018, before experiencing a gradual decline in recent years. “Entertainment” followed closely, hitting its peak in 2014, but showing a significant rise in views until 2020, when its popularity began to taper off. Meanwhile, categories like “Gaming”, “People & Blogs”, and “Howto & Style” have maintained steadier, yet far lower, view levels throughout the years. We see a substantial dip in viewership for most categories in 2021. While some have gradually increased viewership, many have stayed steady or dwindled.

In conclusion, “Music” and “Entertainment” have dominated the ten years, indicating YouTube audiences use the platform to be entertained. However, the recent dip in viewership for both categories and the gradual increase in viewership for more niche categories, indicate opportunities for these niche categories can increase their market share for audience attention with strategic marketing plans.

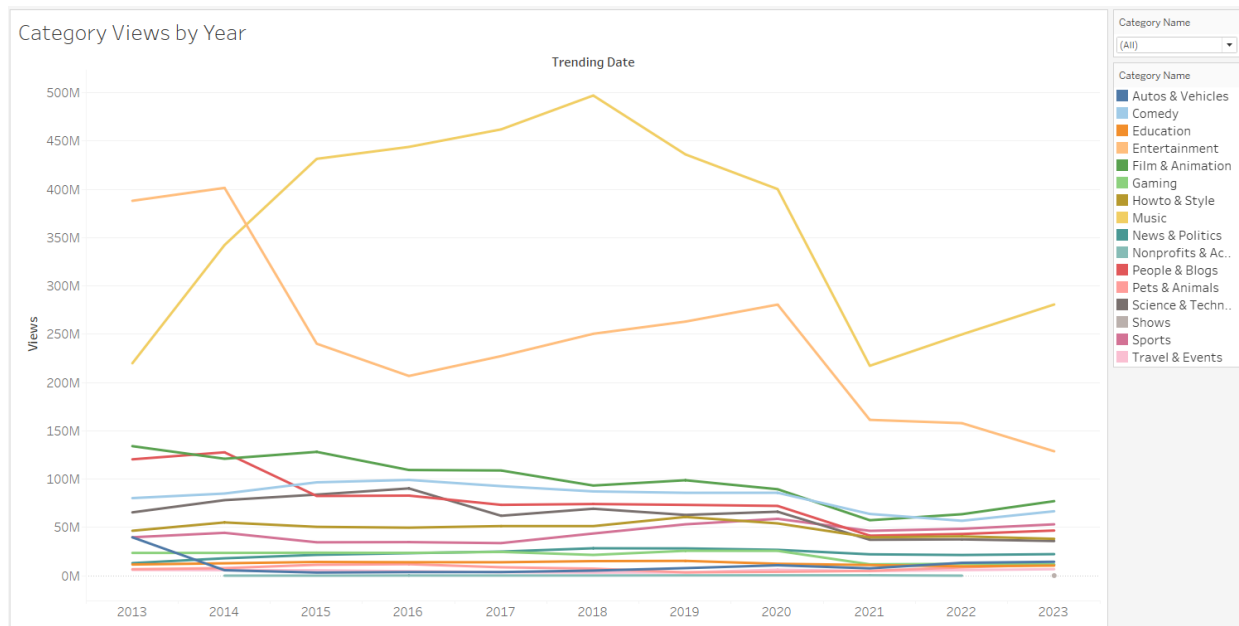


Figure 2: line chart of top five categories and their views over time.

[Line Chart: Top Five Category View Trends](#)

Visualization 3: YouTube Content Performance & Insights (Dashboard)

The dashboard provides an overview of YouTube content performance. It includes key visualizations that highlight the relationships between various factors such as most popular categories, highest engagement measured by views and engagement, and regions.

The dashboard was designed to provide key insights: top categories by region, top five channels per category, and engagement rate per top five channels. The dashboard displays information for all categories. A category filter has been added for the reader to analyze in greater detail. In Figure 3, in the top left corner displays a table chart with the category name, top five channels, and total views per channel. A calculated field was used to filter videos, leaving only the top five channels (*see notes section*), and also used in the Engagement Rate chart. In the top right corner displays a bar chart for the engagement rate for the top five channels. The engagement rate was calculated using a calculated field (*see notes section*). At the bottom of the dashboard, is a map chart revealing which regions delineate the most or least viewership. Regions with higher viewership are represented by darker shades, with lighter tones indicating areas of lower viewership. We adopted a purple color scheme throughout the dashboard to make it gentler on the eyes and still be helpful to those who may be color-blind. In the bottom right-hand corner is a category filter to explore more in-depth and a color legend for total views.

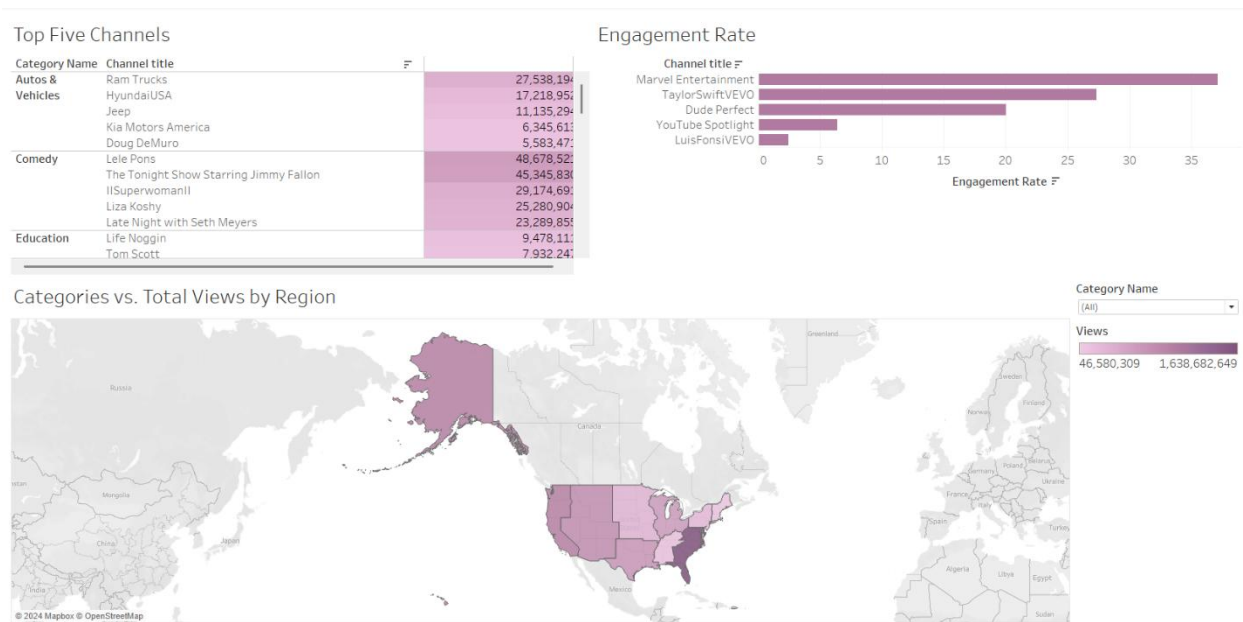


Figure 3: Tableau dashboard representing the top five channels per category, engagement rate for the top five channels, and viewership by region.

The dashboard serves as an essential tool for content creators and marketers, offering valuable insights into user interactions and interests. By visualizing these relationships, the dashboard can inform targeted promotions and campaigns to increase channel awareness and increase subscribers.

[Dashboard: YouTube Content Performance & Insights](#)

References

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Notes:

Calculated fields used in visualizations

Calculated field name: Zero

Formula: 0

Why: This was used to create a donut chart.

Used in: Visualization 1

Calculated field name: Last Trending Date

Formula: IF [Trending Date] = {FIXED [Title]: MAX([Trending Date])} THEN true ELSE false END

Why: This was used to create a donut chart.

Used in: All visualizations

A screenshot of a calculated field dialog box. The title bar says 'Last Trending Date' with a close button (X) on the right. The main text area contains the formula: IF [Trending Date] = {FIXED [Title]: MAX([Trending Date])} THEN true ELSE false END. At the bottom left, it says 'The calculation is valid.' At the bottom center, it says '3 Dependencies' with a dropdown arrow. At the bottom right, there are two buttons: 'Apply' and 'OK'.

Calculated field name: Channel Rank by Category

Formula: RANK_UNIQUE (SUM([Views]))

Why: To only display the top five channels

Used in: Dashboard: Top Five Channels chart and Engagement Rate chart

Channel Rank by Category

Results are computed along Table (across).
`RANK_UNIQUE (SUM([Views]))`

The calculation is valid.

Default Table Calculation

3 Dependencies

Apply

OK

Calculated field name: Engagement Rate

Formula: $(([\text{Likes}] + [\text{Comment Count}]) / [\text{Views}]) * 100$

Why: To calculate the engagement rate per channel

Used in: Dashboard: Engagement Rate chart

Engagement Rate

`(([Likes] + [Comment Count]) / [Views]) * 100`

The calculation is valid.

2 Dependencies

Apply

OK