# Global Engagement of Trending TikTok Videos & YouTube Shorts in 2025

By Brandon Danko

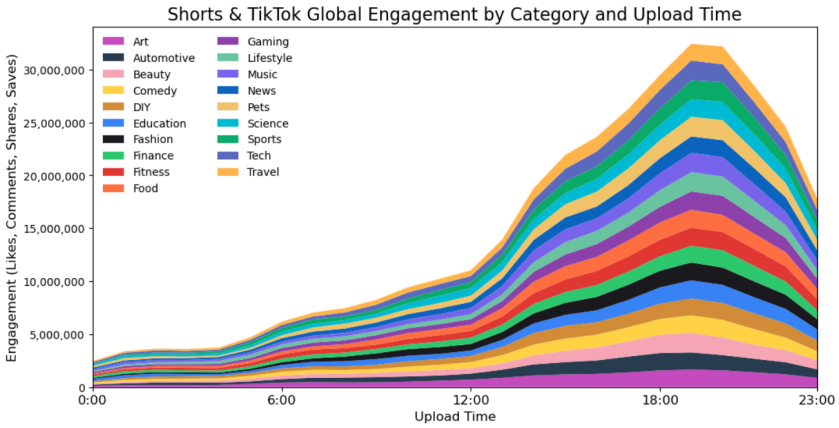


Figure 1: Engagement by Category & Upload

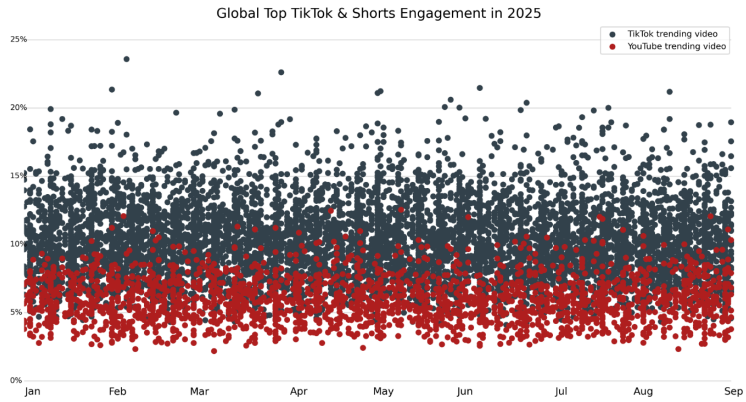


Figure 2: Engagement by Upload & Platform

Figures 1 and 2 showcase the trends and patterns of trending videos' engagement (i.e. the total number of likes, comments, shares, and saves) throughout a period of time in 2025.

For Figure 1, each line stack represents a category for both YouTube and TikTok that the videos uploaded were categorized in, with the X-Axis representing the hour of the day when the video was uploaded localized to the country of its origin and the Y-Axis represents the combined engagement of all videos uploaded at a certain hour of the day. This figure shows that videos of all categories uploaded in the afternoon and evening garner much more engagement than those uploaded in the mornings or nights, with videos receiving the highest engagement are uploaded between 7-8pm. However, some categories still receive moderate levels of engagement outside of these hours, such as Education, Science, and Travel videos in the morning.

For Figure 2, each dot represents a top trending video, where black dots represent a TikTok video and a red dot represents a YouTube short, with the X-Axis signifying the date from January 1 to August 31 of 2025 that the video was uploaded, and the Y-Axis signifying the rate/percentage of viewers that engage with the video. This figure shows that there is a significantly higher engagement rate of TikTok videos than YouTub shorts, despite both platforms showing a relatively consistent amount of engagement throughout the year.

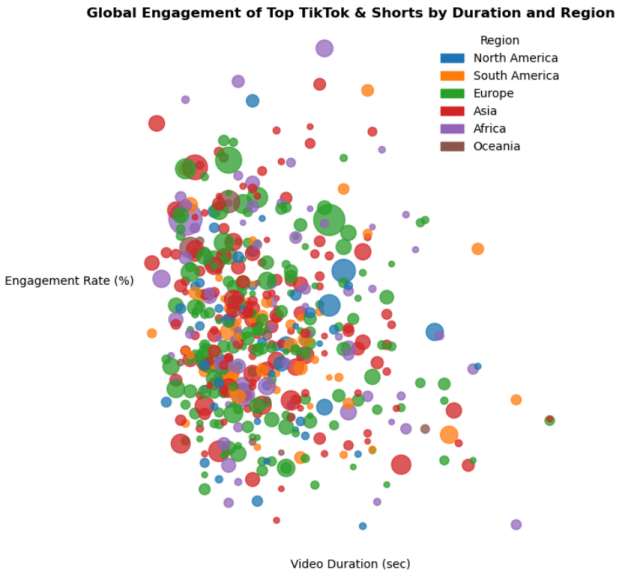


Figure 3: Engagement by Duration & Region

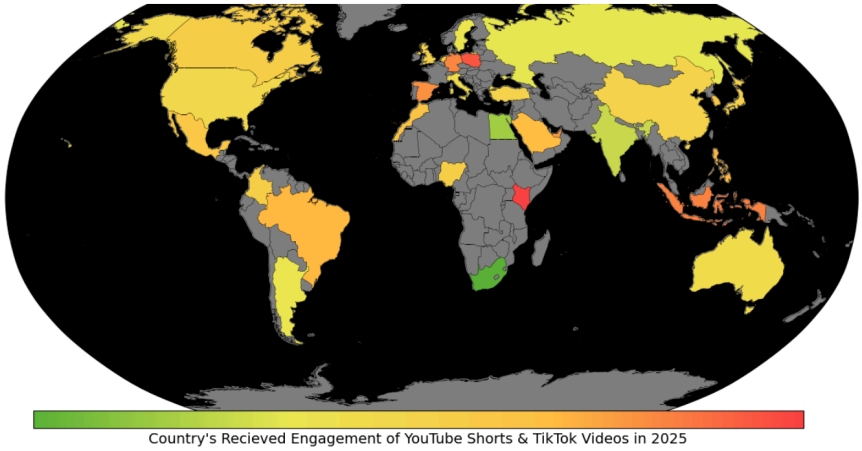


Figure 4: Engagement by Country of Upload

Figures 3 and 4 analyze trending videos' engagement in relation to the country or region/ continent the video was uploaded from this year.

For Figure 3, each bubble represents a top trending video on either YouTube or TikTok, where the color of the bubble indicates what region it was uploaded from (blue for North America, orange for South America, green for Europe, red for Asia, purple for Africa, and brown for Oceania) and the size of the bubble indicates how much engagement that video received. The X-Axis represents how many seconds long a video is, ranging from 5 to 90 seconds, and the Y-Axis represents the rate viewers engaged with that video, ranging from 1.5% to 23.5% of viewers. What the figure revealed is that most top videos are shorter in duration, but also relative average to below average engagement per viewer. However, as seen with Figure 2, much of the relative lower engagement rate could just simply be attributed to YouTube shorts in general. Among the videos that have received the highest engagement per viewer are those uploaded in Africa, Asia, and the Americas. However, the videos with high rate of engagement per viewer that also have the highest total engagement are uploaded mainly in Europe, all of which are of average "short-form" video length or shorter.

For Figure 4, each country is outlined in the global map and color coded by how much total engagement videos uploaded from that country receive from trending short-form videos on TikTok and YouTube. For the color of the countries filled in, it is a gradient range between green, yellow, orange, and red, where green signifies relatively low engagement for videos uploaded from that country, yellow is below average engagement, orange is above average engagement, and red is relatively high engagement. The figure reveals that the highest levels of engagement

of short-form videos originating from a specific country in 2025 is neither the US or China, but actually Kenya, with Poland and Indonesia not too far behind, and South Africa seemingly at the bottom of total engagement for short-form content (besides the countries in grey, which had no data from the dataset).

**Data & Method:**
The dataset I used for this analysis was found on Kaggle, titled “Short-Video (YouTube/TikTok) Trends – EDA,” containing 48,080 entries of trending YouTube shorts and TikTok videos uploaded from January 1st to August 31st of 2025 (~60% TikTok videos and ~40% YouTube shorts). The dataset contained numerous columns for each entry, including but not limited to: country, region, duration, upload hour, published date, category, engagement rate, and engagement total. All four visualizations in this report were created in Python using matplotlib and other Python libraries such as numpy, scipy, and cartopy. For more information on the technical code and dataset used, check the GitHub link below.

**Importance:**
In terms of short-form content that is less than 90 seconds, TikTok remains currently as the most popular social media and video streaming app for this type of content. While YouTube is generally considered the most popular social media and video streaming app for all types of videos, they created Shorts as a response to the new wave of popular and trending short-form content that started from Vine and evolved into TikTok. How a video on these platforms becomes popular and trending outside of the creator’s dedicated audience is largely dependent on engagement metrics and how well viewers are engaging with the videos. However, a lot of people view this type of algorithmic engagement metric tracking as elusive and don’t fully understand the statistics of how much better a video could perform if it was uploaded at a different time, a different platform, or even from a different country, or based around its video length. There are numerous other metrics to look at this from, but I chose these ones for my visualizations because I find them as among the most impactful and interesting to choose from with this dataset.
Initially, I started analyzing this dataset through a simple scatter plot graph, separating the engagement between YouTube and TikTok. However, I then wanted to encapsulate further data using graph types that we have learned all throughout this semester, from bubble plots, to stacked area charts, and even using global maps. I chose these three specifically because I thought they could best utilize the data relating to engagement in the most visually interesting way. With the bubble plot, we would see if longer or shorter videos would get higher engagement and spot popular videos based on certain regions. With the stacked area chart, we would understand how different video categories perform during the day, as it highlights peaks and significant changes. With the global map, we would learn about geographic patterns of trending videos by total engagement. All of these visualizations put together gives us a better picture to understand how videos from all over the world on these platforms become popular and gain so much traction for what is mostly under a minute of content.

**GitHub link:**
https://github.com/Schmeedly/Global_YouTube_TikTok_Engagement_Visualization