**Idea 1: Seasonal Shifts and Consistent Trends of YouTube categories**

How do YouTube video categories evolve in popularity over time? The idea is to analyze the top YouTube video categories from 2005 to 2019 by creating a ranking for each year. This will allow to identify which categories were the most popular in any given year, and if certain categories consistently dominate the platform. Furthermore, I would explore if there are seasonal patterns by examining category trends on a monthly basis over selected years only, to keep it simpler to handle. For example, do DIY and crafting categories spike during the Christmas or Halloween season, while summer vlogs trend in the warmer months? Alternatively, are there categories, like gaming, that maintain consistent popularity throughout the year without major seasonal shifts? One could also look if categories take breaks at predictable times—identifying possible trends in video uploads, thus investigating whether YouTube video popularity follows a predictable rhythm over the year, or if certain categories have their own unique patterns of consistency or breaks.

**Idea 2: Exploring YouTube as a platform for learning during key events**

Has YouTube become a key source of public information for major global events? The goal here is to explore how viewers use YouTube to learn about important real-world events. In our case, I identify a set of significant historical events in the timespan of our dataset (2005-2019) and investigate how video views in related categories evolved before, during and after those events. For instance, did the 2016 U.S. presidential campaign lead to increased views in political commentary categories? Did the #MeToo movement in 2017 see a surge in personal testimony of sexual harassment and abuse? Other potential events include the swine flu pandemic in 2009 and the Malaysia Airlines Flight 370 disappearance in 2014, both of which could have led to spikes in views of categories such as medical biology or aviation. By tracking the growth of relevant categories around these significant moments, this project aims to determine if YouTube has indeed become a preferred platform for users seeking to stay informed or to learn about major societal issues.

**Idea 3: Understanding the virality of "Challenges" on YouTube**

What makes YouTube challenges go viral, and how do they spread across the platform? Here we want to analyze the lifecycle of viral YouTube challenges like the "Ice Bucket Challenge" or the "Cinnamon Challenge" to understand how these trends develop and spread. Using videos with challenge-related keywords, I would gather key data such as upload dates, view counts, likes, comments, and channel categories to map out the growth of such viral trends over time. When do challenges first appear on YouTube, and how quickly do they gain traction across different channels? I would also track the peak times for challenges and visualize how their popularity rises and falls. This project could be extended by attempting to predict which challenges will become viral based on early performance indicators, such as initial views, comments, and shares.