



## App Usage Analysis

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### 1. Overview

Krikey is interested in gaining a better understanding of its current app's health and user base. This analysis focuses on the key features of the application with the goal of identifying data-driven insights related to users' engagement trends. This will help Krikey gain a strong foothold in its current users and develop strategies that would further improve the product.

### 2. Methodology Overview

The process flow for this task is as follows:

- Data Cleaning and Transformation: New fields were generated through feature engineering. Files are then combined to include the new features.
- Data Exploration and Pattern Identification: The data was aggregated on multiple granularities, including user level and video level, to gain a multidimensional understanding of the data and identify any existing patterns.

After that, product recommendations and next steps will be discussed to improve the quality of the app.

### 3. Analysis

#### 3.1 Data Cleaning and Transformation

I first checked for null values in each file and the distributions of different data attributes. There were no null values and no outstanding outliers.

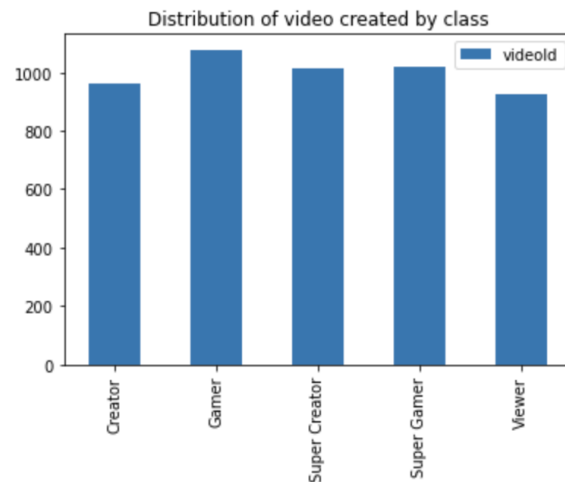
New fields were generated based on the existing attributes:

- *country*: column Country was generated using the coordinates provided in the watchVideos file. *Country* represents the nation in which users watched video from
- *date\_diff*: number of days it took for each user to create their first video from the day they registered in the app. This field was calculated by generating the first video created by each user, then subtracting the registered date
- *month* and *day\_of\_week*: months and day of the week were generated from *created\_date* columns

#### 3.2 Data Exploration and Pattern Identification

##### 3.2.1 User-level Exploration

There are six different user classes, which describe the class that the user has been classified as, in the dataset. The classes include Gamer, Super Gamer, Super Creator, Creator, and Viewer. Since no information was provided to explain the method of this classification, I made the assumption that the class describes the users' habits (i.e. Super Creator describes users who make the most videos, Super Gamer describes users who play the most games, Viewers are those who mainly watch videos only,...). Therefore, the initial assumption was that the number of videos created would vary greatly among the classes. However, the data proved the opposite, showing that the number of videos created by each class was not drastically different:

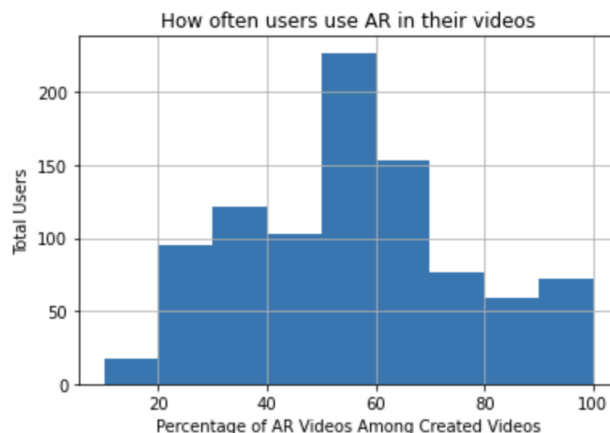


Therefore, the users might be classified randomly in this case. This attribute doesn't offer much insight into the analysis, which led me to analyze the data based on the video level.

### 3.2.2 Video-level Exploration

#### *Augmented Reality*

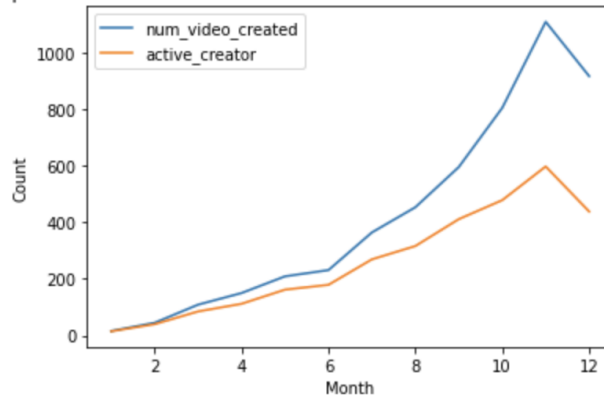
Since Krikey is an Augmented Reality (AR) gaming app, it is important to look at how users engage with this feature. Based on the analysis, 92.4% of users have experienced creating videos using AR. However, only 14% of those users included this feature in their videos frequently ( $\geq 80\%$  of their videos).



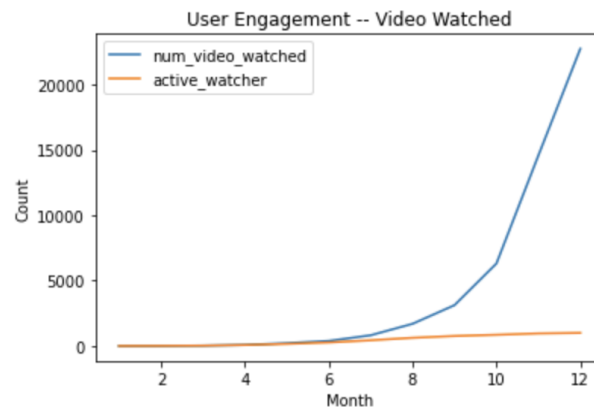
### *Video Engagement*

Another critical aspect is to understand users' video engagement in the app. For this particular dataset, user engagement could be defined as 1) the number of videos created and 2) the number of videos watched. The analysis shows an increase in user engagement as time progresses. While both the number of videos created and active creators (users who created videos) per month showed a similar trend (increased until November then dropped in December), the number of videos created showed a higher increase rate.

Comparison Between Number of Videos Created and Number of Active Creators

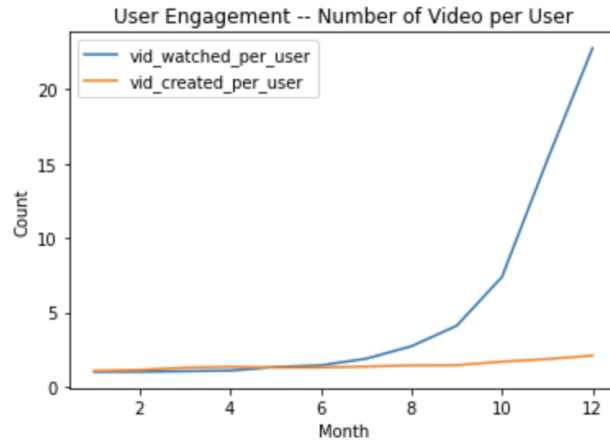


Similarly, the number of watched videos and active watchers (users who watch videos) also displayed a similar trend.

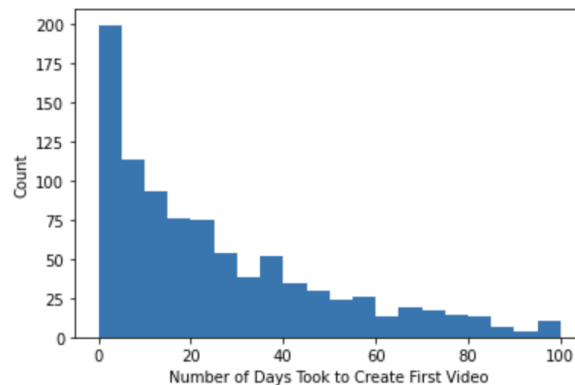


Therefore, both creators and watchers were making and consuming more videos. The increase in user engagement could be a result of successful marketing campaigns that Krikey was running at the end of the year, a new and better app version, or the nature of the holiday, which allowed users to have more time using the app.

However, the average number of videos watched per user is much more than the average number of videos created per user.



Besides the low number of videos created per user, many users also take a long time to create their first videos.



#### 4. Product Recommendations

##### *Improve the Augmented Reality feature*

Based on the analysis, even though a large number of the existing user base has experienced AR when creating videos, they do not use this feature persistently. As an AR-based game app, Krikey could improve this feature to encourage more video creation with AR.

##### *Make the video creation experience more intuitive*

The analysis shows that users view Krikey as a platform to watch videos rather than a place to create videos. It took them roughly 35 days to create their first videos. Therefore, one hypothesis is that users could encounter challenges while navigating through the video creation process. I recommend Krikey do further investigation and perhaps could make the video creation experience more user-friendly in order to have users engaged in this activity.

#### 5. Next Steps

Krikey team could do the following to further understand the users' behaviors:

- Perform A/B testing (e.g: testing the placement of the creating video button, such as top right corner vs. at the bottom in the middle like Tiktok) to see whether placement affects the number of videos created per user.
- The analysis shows a surge in user registration in July, September, and November, with a significant drop in December. Why does this happen? Did Krikey launch new changes in the app that resulted in this trend?
- The analysis also shows a decrease in video consumption on Thursday that gradually picked up towards the end of the week. However, video consumption is still higher on weekdays (beginning of the week). If the user class was not assigned at random, which user class contributes the most to the drop and why.