## Overview

User analysis helps teams build products users love which makes them more profitable. This report contains a summary of the data analysis carried out on Krikey's user dataset and the complementary datasets. Souce code which generates the analytic reports and data visualizations can be found in Agnes_He.ipynb in my github repo.

Data Cleaning and Analysis

The primary dataset used in this report is the users data. The users data contains 1000 rows, 4 features. The data is ranging from January 2021 to December 2021. Each row of data represent one unique registered user of the Krikey App. Each user has its id, registration time, class and coordinates at the time of registration.

The data cleaning process involves removing duplicated index columns, changing the features to correct data types and checking for missing values.

The coordinates were converted from strings to floats and we can extract the latitudes and the longitudes, and load these data into new columns. Using the coordinate, we can plot a geographical location of the users.
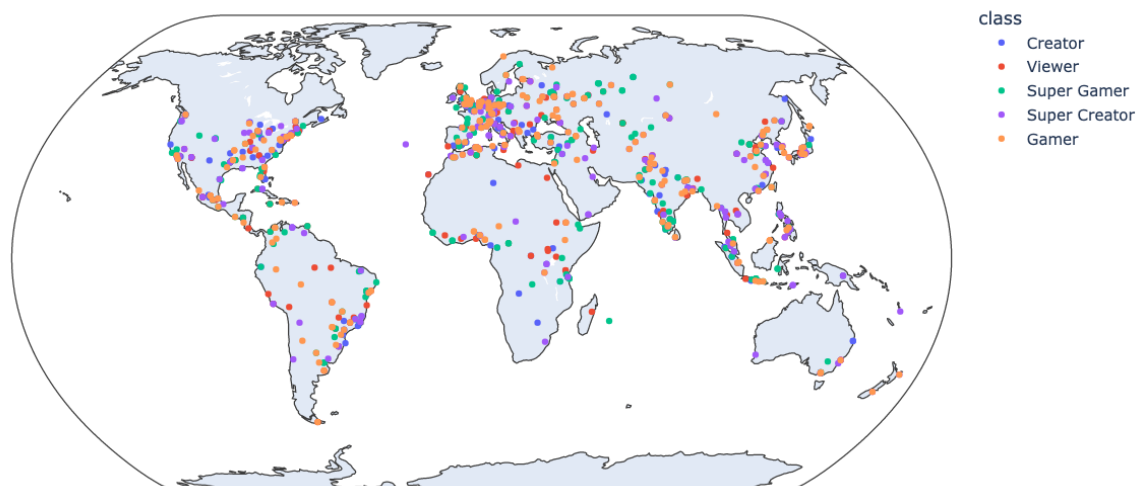
We can also get the countries and continents for the coordinate data. The steps to process the coordinate data Kriley's users comes from 109 countries, and 6 continents. 31% of the users come from Europe, 29% of them come from Asia, and 20% of them comes from North America. Oceania has the least number of users. From a country level perspective, US has more users than other countries.
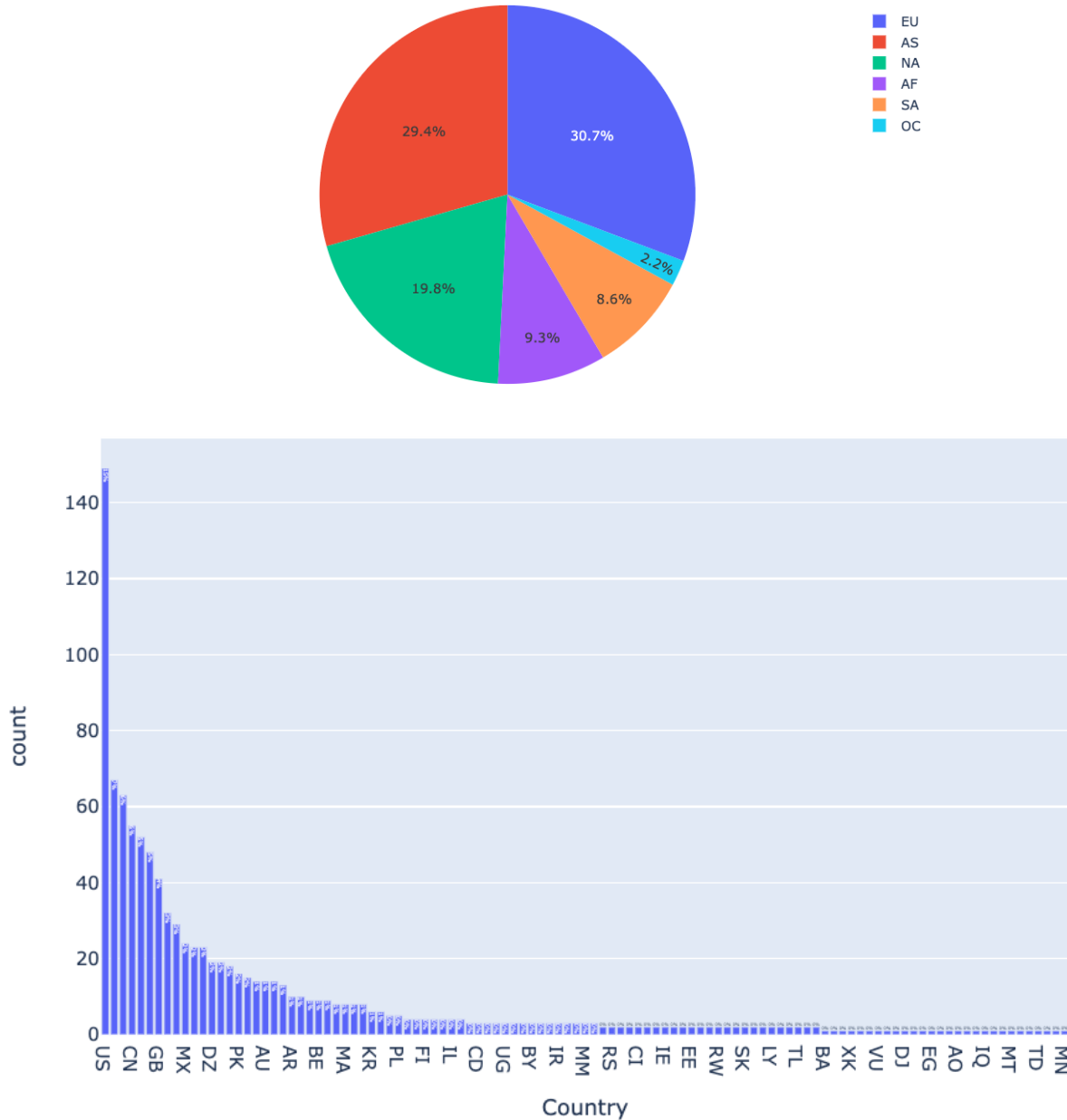
The users are classified into five groups: creator, super creator, viewer, gamer, and super gamer. One questions to ask is how does the classification carried out. What was the methodology used for the user's classification. When I was trying out the Krikey app, during the user registration stage, there is no option or selection for users to choose which class they belongs to. How were the users classified? what was the methodology used for user classification? This is a question that worth finding out to ensure the accuracy of the classification.
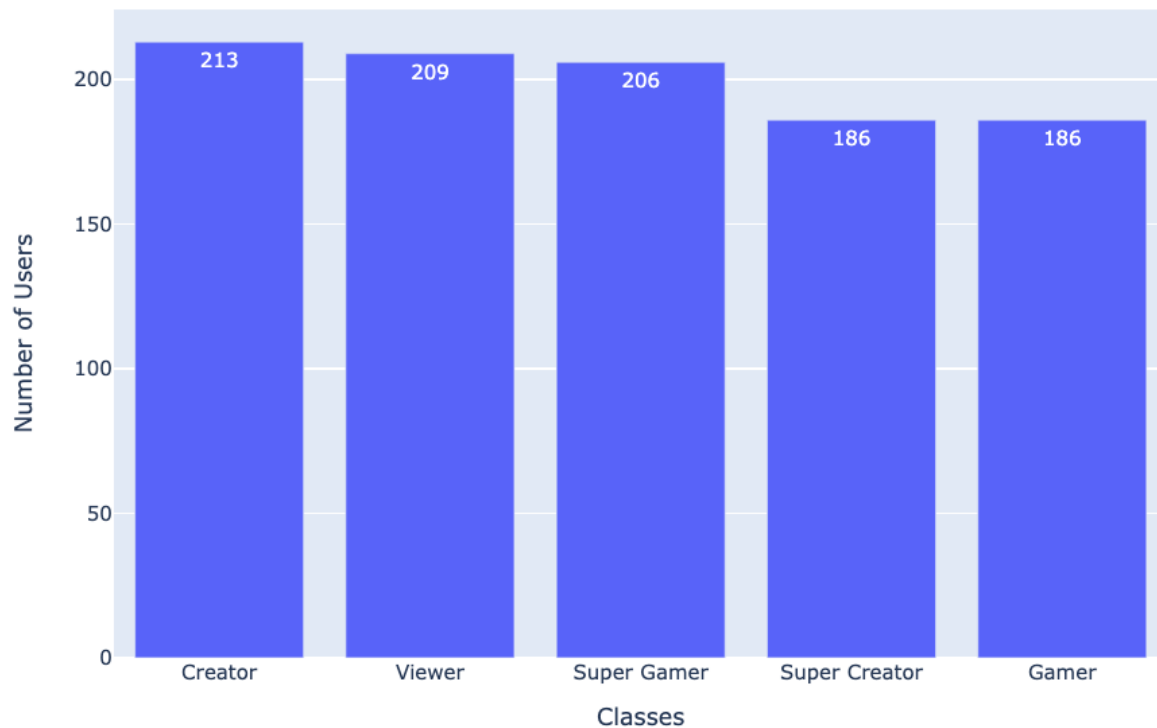
Recommendations

Diversity, is the key characteristic for Krikey's user. It is also the keyword that will help the app to grow and become more successful. The user analysis shows that the users of Krikey comes from different locations and different classes.

The current avatar creator contains elements mainly targeting the South Asia users. However, based on the user's geographical location, we should also design for other types of avatars. One of the recommendation is to allow users to create AR avatars with more skin colors, eye colors, hair colors to improve user experience. In addition, different languages setup options needs to be available for users comes from different countries.

Next steps

One thing is also worth notice: Some features follows a highly identical distributions across different groups. For example, when plotting the histogram of video duration of different game_id, the distribution is almost identical. Similar observations also happened on other features, for example, distribution of num_shares of different operation systems, the distributions of different feeds of videos. In order to conduct a deeper users behavioral analysis, these data and distributions are very important. Thus getting the correct data is an actional next step.

It is also important to know how the users are classified. For instance, what's the difference between a gamer and a creator? What's the difference between a super creator and a creator? Is there a 'super viewer'? Can a user be a creator and a gamer or other classes at the same time? Answering these questions will allow us to have a better understanding of the users' behaviors.

Krikey App Data Projects

After exploring the app, the following three analytics reports would contribute to the app's overall growth and retention:

- Cohort analysis
  Since we already have the overall user analysis, the next step is to dig deeper. A cohort analysis is a study that focuses on the activities of a group of users that shares some common characteristics. Questions to be answered in this report should include:
    - How are different groups of users behave differently?
    - Is there any relationships or correlations between user behavior and their nationality, gender, os, user class?
    - How does the characteristics of a population relates to users retention?
- Journey Analysis
  This is the way to measure and understand how users are progressing through paths from the moment they interact with the app to becoming an active user. Questions to be answered in this report should include:
    - How users download Krikey app?
    - What is the onboarding process?
    - Is the guidance provided has any corelations with user experience?
    - What incentives are given to return or reuse the app?
- Feature performance analysis:
  There are many features in Krikey app that a user can explore. A user can play games, create videos, watch videos, and social with other users. The performance of each feature is definitely very crucial to the overall success of the app. Experiments and analysis should be carried out to improve the feature performance. For example, when a user finishes watching one short videos on Krikey, it automatically slides to the next short video. Experiments can be conducted here, questions to be answers are like:
    - How does the video recommendation algorithms work?
    - Is the algorithm pushing the content based on the users profile?
    - Can we change the time interval between each video to allow users have more time to react on the video, e.g. adding likes or comments on the video?.