## Overview

Final Fantasy XIV (FFXIV) is a massively multiplayer online roleplaying game (MMORPG) that often releases new content in patches to keep players engaged and to keep the game fresh. They recently released the latest of these patches, Patch 5.4: Futures Rewritten, on December 8, 2020. This analysis aims to answer the question of if these patches are effective at exciting players and keeping them engaged by analyzing the sentiment of tweets both before and after the release of Patch 5.4. This information would be valuable to those invested in the game both emotionally and financially, as well as the developers of the game and like MMORPGs.

One would expect that the excitement and engagement of releasing a new patch would produce more positive-sentiment tweets in the community around FFXIV than the period leading up to the patch, where the content might be getting old or stale.

## **Analysis**

Two thousand tweets were collected each day via Twitter's REST API across a seven-day period: three days before the patch released, the day FFXIV was unplayable due to maintenance, and 3 days following and including the release of Patch 5.4. The only criteria for the tweets were that they included the hashtag #ffxiv and were written in English. As it pertains to the results section, the tweets gathered during the downtime have been excluded from analysis.

After collection, a sentiment analysis was performed on the text of each tweet to provide a polarity score, ranging from -1 to 1, where a score above 0 meant the tweet typically had a positive sentiment (Figure 1). The data did not follow a normal distribution, so significance was determined by a paired Wilcoxon test. Retweets were counted in the analysis.

## Results

Examining the data revealed a few things. The first was that more than half of the tweets collected (n= 6,618) were determined to have a polarity score of 0 (Figure 2). It is unclear whether this is the true data or an anomaly that indicates the presence of bad data, but further research might be necessary. Secondly, when analyzing sentiment before and after Patch 5.4, sentiment was not significantly more positive after the patch than before (p = 0.9923), but the opposite is true: sentiment was less positive after patch 5.4 (p = 0.0078).

What is most interesting, however, is the interaction that is visible when non-polarized tweets were removed from the analysis: While negative sentiment did not increase significantly after the patch (p = .052), positive sentiment actually decreased (p < .001) after Patch 5.4.

Perhaps players just weren't as excited by this new content, or were frustrated that they lost a day due to downtime prior to the patch going live. Unfortunately, these findings require more analysis to thoroughly explain. Further review could be done on the features of Patch 5.4 that had the most positive or negative sentiment, or if perhaps there are other variables that this analysis did not account for, such as time of day or in-game events. Study over a longer period may also yield valuable insights. The good news for FFXIV enthusiasts is that the percentage of positive tweets was largely higher both before (80%) and after (76%) Patch 5.4.

## Figures

Figure 1



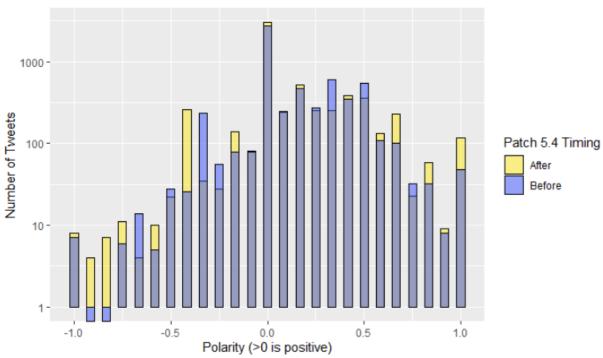


Figure 2

