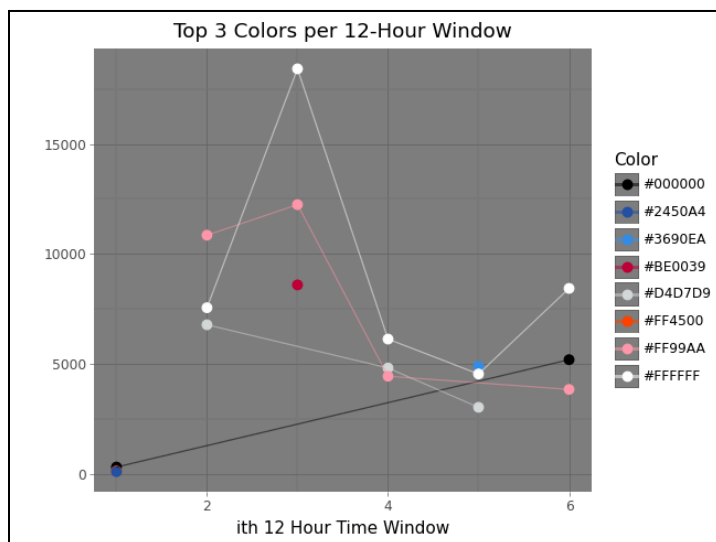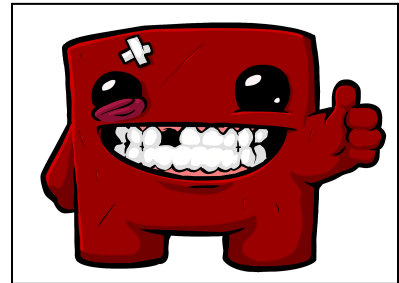# How The Great Wave Off Kanagawa Survived The r/place 2022

The Great Wave off Kanagawa, a Japanese artwork by Katsushika Hokusai in 1831, is one of the most iconic images in art history. In 2022, it appeared on the r/place canvas, where it was interacted with by 128,329 users, including both contributors and those who destroyed it.

During the 2022 r/place event, the image was destroyed three times. The first attack attempted to replace it with Super Meat Boy, but it was quickly restored. Other streamers tried to transform it into a blue void and later a black void, but both failed due to the use of an overlay and support from Germany, Tunisia, and other communities.
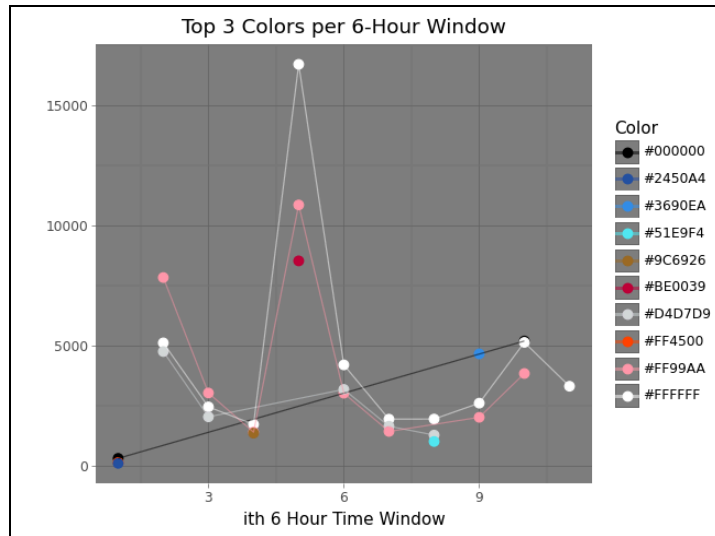
Since this piece was destroyed three times yet managed to maintain its presence in the 2022 r/place canvas, it was interesting to examine when these incidents occurred and how quickly the Great Wave community responded. This analysis recorded the top three colors in the wave's region for every twelve-hour and six-hour period throughout the five-day event.

The line graph suggests that the Great Wave did not begin construction until the second 12-hour time window, which occurred between April 2 at 5:00 PM and April 3 at 5:00 AM. Since red is not a color associated with the Great Wave, the spike in red pixel placements during the third 12-hour period (April 3 at 5:00 AM to April 3 at 5:00 PM) could indicate the attempted takeover by Super Meat Boy. However, red was only the third most common color at that time, with pink and white remaining dominant. The fact that these colors persisted in the next time window suggests that the Great Wave was restored within approximately 12 hours.

A surge in blue pixels in the following time window (April 4 at 5:00 AM to April 4 at 5:00 PM) likely marks the moment when Russian streamer Dmitry_Lixx replaced the area with a blue void. This was followed by a takeover with a black void, which explains the spike in black pixels during the final 12-hour period (April 4 at 5:00 PM to April 5 at 5:00 AM).

To further investigate how the Great Wave was restored after the final takeover, we now examine 6-hour time windows. Towards the end, it's evident that black and white were equally prominent, with pink also being a noticeable color. This suggests that within this time frame, the black takeover occurred, followed by an attempt at recovery. However, the spike in white pixels during the last 6-hour time window indicates either final touch-ups or last-minute recovery efforts.

These results suggest that the Great Wave community was highly dedicated to maintaining the artwork on r/place, demonstrating a strong commitment to preserving it. On the other hand, those attempting to take over the space likely lacked a similarly large and supportive fanbase, were possibly trolling, or simply didn't have the same level of dedication.

DuckDB vs PySpark

After running my analysis with both DuckDB and PySpark, I found that they took almost the same amount of time to complete. However, I spent more time with PySpark due to the learning curve and additional dependencies I had to install. Ultimately, I prefer DuckDB, as I was able to achieve the same results more efficiently.