

## “r/place Week 4 Data Analysis: Most Painted Pixels”

The 2022 r/place subreddit created a sprawling digital canvas where memes, strategies, and community rivalries collided, forging patterns that are as much a commentary on internet culture as they are on collective action. To make sense of it all, we must answer:

### Why are the most painted pixels the most painted?

Put simply: the most painted pixels (see Table 1) are the most painted because more r/place users decided to place at those locations than any other. Let’s investigate how they became the most popular.

Rank	X	Y	Count
1	0	0	98,807
2	359	564	69,198
3	349	564	55,230

Table 1: Top three most painted pixels (calculated in get\_top\_coords.py)

### Why did users decide to place at these locations?

To answer this question, it is worth diving deeper into the data:

*Most placed colors (Figure 1):*

Extracting the top three colors from each of these pixel locations reveals that there is an odd one out: (0, 0) has a far different color signature than (359, 564) and (349, 564). These two appear to have very similar color signatures, so it is worth providing some context to determine if this is abnormal.

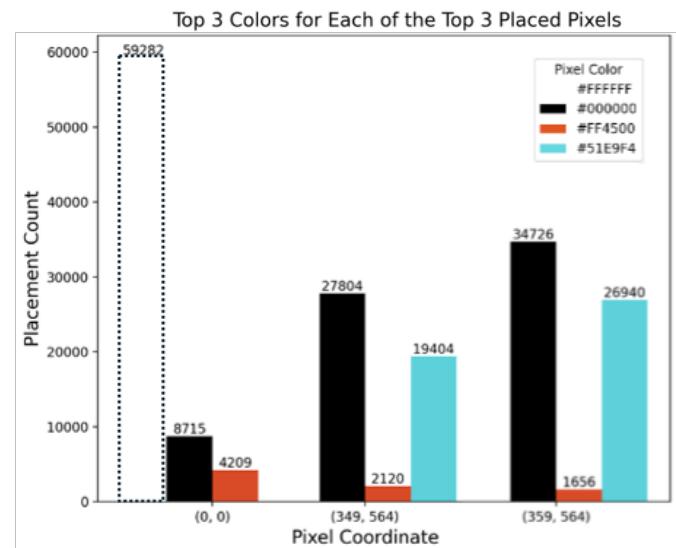


Figure 1: Top three colors painted for top three painted pixels (calculated in colors\_at\_coords.py)

*Comparing color proportions (Table 2):*

For each of the three locations, there is a color that was placed disproportionately compared to the overall dataset. At (0,0), white was placed at a ~40% higher rate. At both

(359, 564) and (349, 564), black was placed at a ~29% higher rate, while light blue was placed at a ~35.5% and ~31% higher rate, respectively. These numbers indicate that some outside factors were at play influencing Redditors at these locations. It also confirms that (359, 564) and (349, 564) are connected in more ways than just their y-value.

Color	Overall (%)	(0, 0) (%)	(359, 564) (%)	(349, 564) (%)
#FFFFFF	20.11	60.00	2.01	2.74
#000000	21.02	8.82	50.18	50.34
#51E9F4	3.55	2.13	38.93	35.13
#FF4500	8.99	4.26	2.39	3.84

Table 2: Overall and per-pixel percentages of color placements (calculated in color\_percent\_ovr.py & color\_percent\_px.py)

## Why were these colors placed at these locations?

The large number of participants who placed white at (0, 0) is likely because this was the default value in the UI when selecting a location and color, and people are lazy. However, it appears that the other two locations may have a more nuanced explanation.

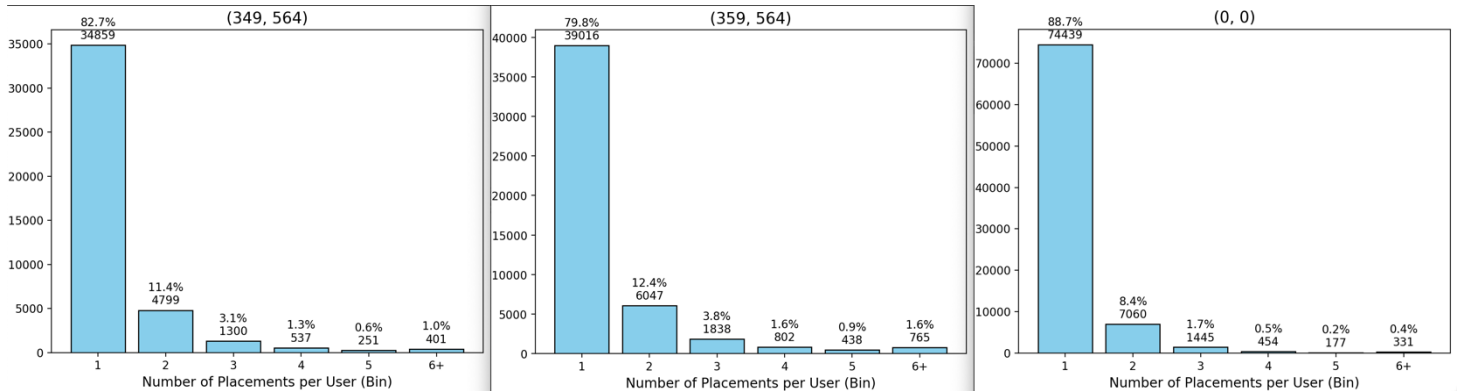


Figure 2: Categorizing users who placed at the same location multiple times (generated with user\_placements.py)

As seen in Figure 2, unlike (0, 0), the two locations with the y-value of 564 appear to have large proportions of users who returned to place in that spot again. In fact, both locations had ~20% of users place more than once, and  $\geq 1.0\%$  place 6 times or more! These numbers, combined with the irregular color data at these locations, provides strong evidence that there was a coordinated group of users working together to take over these locations as part of a larger piece of pixel art. Of course, this is the nature of r/place, as subreddits compete to show who is the strongest and most unified group!

## Why do users appear to be coordinated in placing #51E9F4 at (349, 564) and (359, 564)?

Investigating the final r/place portrait, it is easy to discover how there was such a large amount of Redditors placing in these locations (see Figure 3). These two locations, exactly 10 pixels apart, are the centers of the eyes of the skull in the banner for the Mugiwara Pirates. Apparently, they are an “extremely infamous and powerful pirate crew” from the anime TV show One Piece. This explains a lot, as r/OnePiece is in the top 1% of all subreddits by user count at over five million users.

## Why did they choose #51E9F4?

Upon further sleuthing, it appears that the folks from r/Undertale (an indie game fandom) attempted to hijack the Jolly Roger skull to resemble one of their own characters called Sans, who has an electric blue eye (see Figure 4).



Figure 4: Sans from Undertale

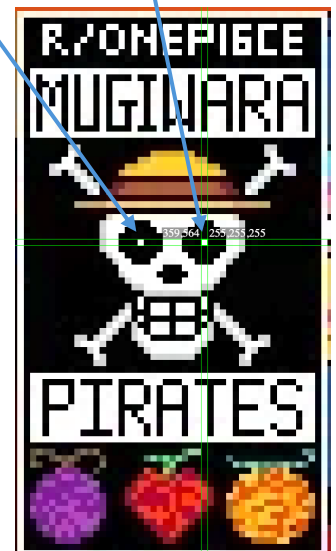


Figure 3: The final result in r/place