

# Crazy Defense Heroes On-Chain Analytics Report

# A note about the current blockchain gaming environment

It's important to note how in the current blockchain gaming environment, most people are loyal to a single game. How do we know this? From nearly 400,000 unique addresses playing blockchain games on the Polygon blockchain this last month, only 2% of them played more than one game.

Each person that plays more than one game provides invaluable data for us to analyze and learn from. The 8,000 unique addresses that played multiple blockchain games allows us to discover statistically significant insights into user behavior.

That being said, there are a variety of games already on Polygon that create a rich dataset to analyze. Below, we show unique users and their distribution across the Polygon gaming ecosystem.

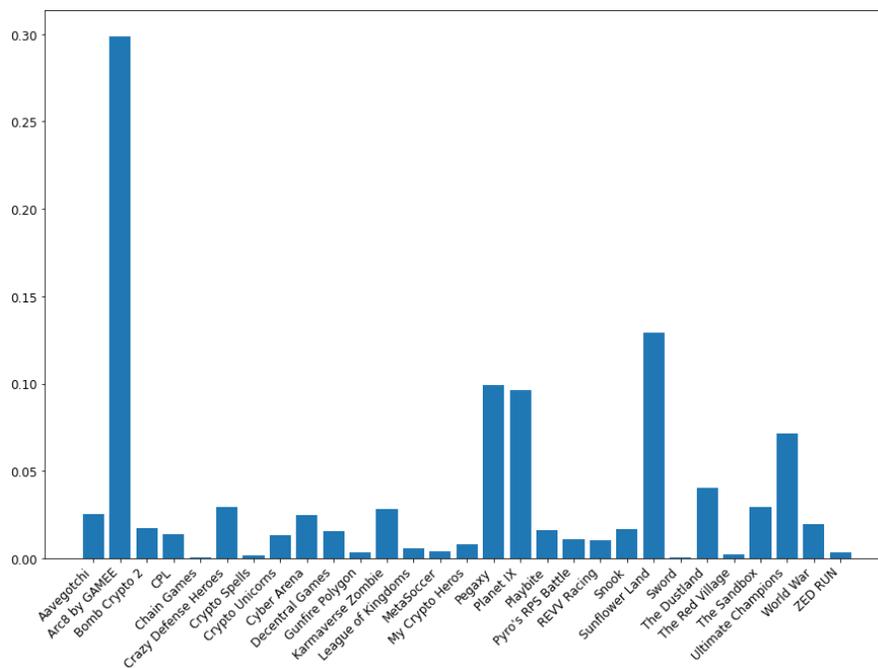


Figure 1: Distribution of unique users across the 29 most popular Polygon games in September

As we can see, Crazy Defense Heroes (CDH from now on) has a non-negligible market share at ~4% of the unique addresses that interacted with one of the blockchain games.

# Crazy Defense Heroes Analysis

## Similar Games

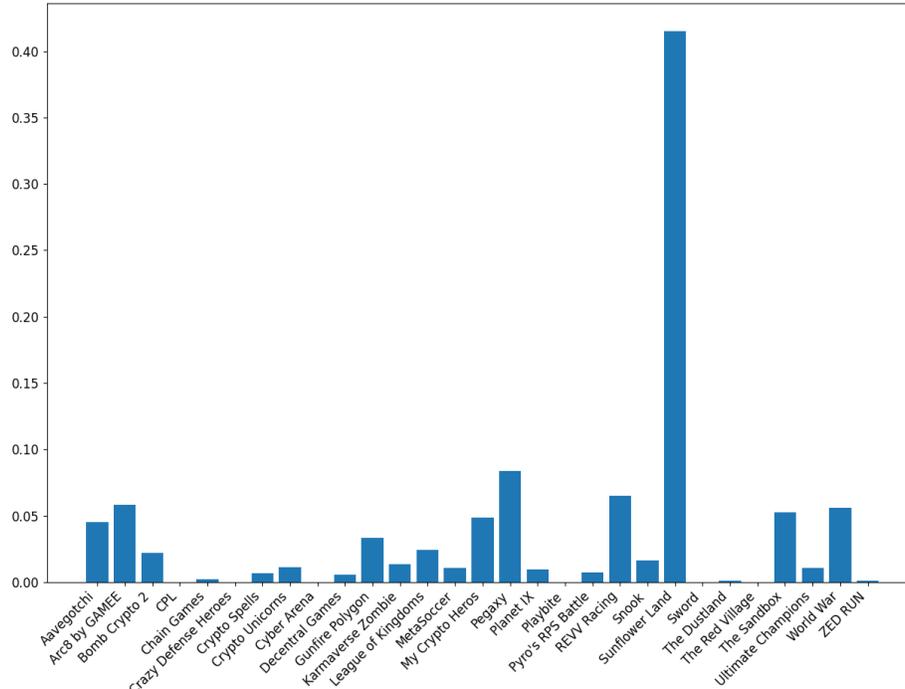


Figure 2: Distribution of CDH players who played other games

By looking at players of CDH, we are able to determine what other games they have tried and gain insights into their user profile. For CDH, 9,963 users have played at least one other blockchain game which forms a good sample size to perform analysis on. Figure 2 shows that Sunflower Land (SFL) is by far the most likely game to be played together with CDH.

## SFL and CDH order of play

Diving deeper, we can analyze the order in which players began playing, or stopped playing SFL and CDH. In other words, of the 376 players who played both games, we determine what fraction of them played CDH before SFL. We also determine what fraction of them “abandoned”, or stopped playing CDH first.

Event	Fraction of players
Joining CDH first	59.8%
Abandoning CDH first	43.9%

Table 1: Chance of user joining/leaving CDH before they join/leave Sunflower Land in September

Table 1 paints an interesting story. Compared to SFL, In the last 30 days, CDH has seen most users try their game first and leave it *after* they leave SFL for good. This is good news for CDH. This can be compared to the last 90 days where 63.2% of users would leave CDH for good before they left SFL. This shows how only recently, users have been choosing to play CDH longer than SFL.

## Spending Power

The spending power of a game is an important metric as it helps inform decisions about whether the marketing team is attracting the right type of player (i.e. someone who spends more). Spending power is calculated by summing every outgoing transaction that the player has made in the last year. It is more indicative of wallet balance because most users refill their wallets as needed. Thus spending power is more closely related to how profitable the user will be for the game.

The median spending power of CDH users is 6 Matic, this is higher than the median across blockchain gamers of 4 MATIC. However, it is much lower than the median spending power of Sunflower Land players of 22 MATIC.

This is possibly due to the fact that CDH is a mobile game with a mainstream audience. The addresses that are associated with CDH may be users new to web3, and thus haven't spent as much yet.

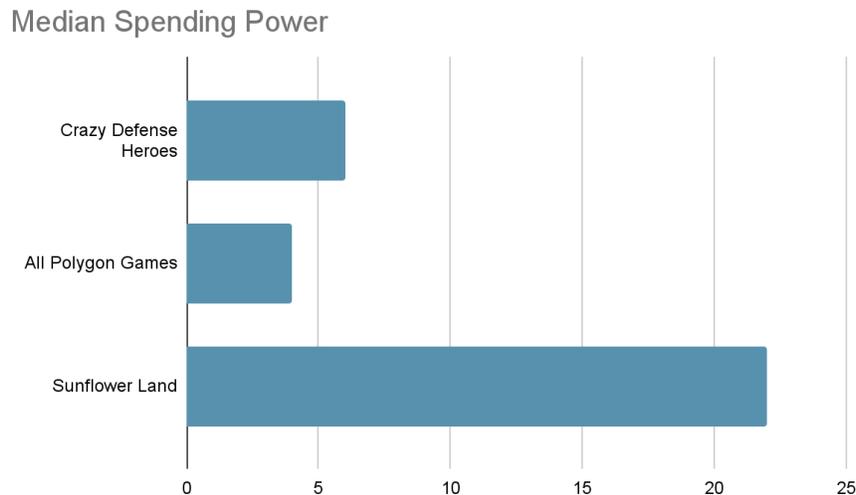


Figure 4: Median spending power of users for CDH, Sunflower Land, and across all Polygon games

To confirm this hypothesis, let's look into the number of users for which CDH was the very first blockchain transaction the user made.

## Web3 user onboarding

Table 2 shows how CDH tends to onboard many more players relative to SFL. It shows how for the majority of its players, CDH is their very first blockchain interaction.

Game	# Unique Players (All Time)	% New players (All Time)	# Unique Players (Last Month)	% New players (Last Month)
CDH	429958	93.1%	291	69%
SFL	207389	38.9%	1062	52%

Table 2: Number of players for which their first transaction was with the game

Table 2 can additionally help us to understand the user base, spending habits of the users, spending power of the users, and determine monetization strategies. It can be used to understand and predict growth patterns of the game as well. A crypto-native user has a much different customer profile than a non-crypto native user. They may have less initial spending power, but they may also be entering the game purely because of the gameplay experience, rather than earning potential. Non-crypto gamers are a much larger market to draw from and could result in faster growth and long-term potential. This may also increase the importance of features like custodial wallets and pay with card.

## Conclusion

We were able to extract multiple directly and indirectly actionable insights from the on-chain data of CDH. We showed how players of CDH are most likely to play SFL as well. This can be used to direct product teams to learn from SFL's mechanics. Additionally, we showed how only recently, CDH players have started to play CDH for longer than SFL which provides positive feedback for recent changes the product team have made. Finally, we discovered that the spending power of CDH players wasn't as high as SFL but this is to be expected because of CDH's user base of web3 newcomers - a discovery that can inform the user profile and product decisions.