



# NFT CREATOR RECOMMENDATIONS & DASHBOARD

TECHNICAL REPORT

By :

Steven Alexander Liong  
Joshia Cahyadi

Mentored by :

Louis Owen

# Table of Contents

1.Introduction .....	3
2.Methodology	
◦ Data .....	4
◦ Workflow .....	5
3.Results	
◦ Assumptions.....	6
◦ Analysis.....	7
◦ Dashboard .....	17
4.Recommendations & Conclusion.....	18
5.Bibliography .....	19

# Introduction

---

Non-Fungible Token (NFT) is one of the biggest phenomena happening in the digital market in late 2021. This non-interchangeable unit of data stored on a blockchain has shown its power as it influences massive people to buy and collect it. This phenomenon has also engaged artists, influencers, and even celebrities to create their own unique NFT projects.

In addition to the individuals, many organizations or associations in various markets also started to build their own NFT projects for many reasons. For example, the sports market is one of the popular markets that is starting to build NFT projects and feel the impact of NFT's power, with the intention of engaging their fans especially when COVID-19 is starting to hit the rest of the world. With that being said, we predict that NFT will become one of the key items in the digital market.

The popularity of NFTs will keep influencing people to make NFT projects and sell them, especially in recent times when celebrities and influencers produced NFTs and attract their fans to buy the NFTs. This results in a massive growth of NFTs creators as well as NFTs collectors. A successful business in the NFT field is not an extraordinary thing to hope for.

Sadly, based on the fact, most of the NFT projects have and are predicted to fail. There are many factors that could be the causes of these failures. On mitigating these failures, we should concern about many aspects and information, especially from the NFT's data itself. In this data project, we want to give analysis and recommendations for people that want to start an NFT project. We bring up our analysis and recommendations based on data and previous successful NFT projects. We hope from our analysis, dashboard, and recommendations, many future creators could be equipped with information that could help them be successful in this NFT world.

# Data

### 1. Events

This dataset contains information about the every occurred events on the Opensea from 23 Jan 2018 - 6 March 2022. It includes event information, such as event type, auction type, NFT wallet, NFT price, and other features regarding NFT events on the Opensea.

### 2. Assets

This dataset contains specific information about 16,000+ NFTs items from Opensea. It includes information, such as NFT name, description, asset category, NFT collection name, NFT traits and other information regarding the NFT in Opensea.

### 3. Collections

This dataset contains specific information about collections from Opensea. It includes information, such as collection name, description, number of wallet, number of items, and other information regarding the collections in Opensea.

For further information for the column's description :

[link gdrive](#)

# Methodology

## Workflow

### 1. Exploratory Data Analysis (EDA)

In this phase, we are trying to find out how each column data type and characteristics in each datasets. By using statistics and graph plotting, we could retrieve the columns' meaning and relationship with other columns. From the output of this EDA, we have the overall picture of the 3 dataset's that could guide us on creating analysis ideas and plans for this project.

### 2. Data Cleansing

In this phase, we check all the missing values on the data and perform any necessary action for dealing with the missing values. We make sure that on the modeling, the missing values won't affect the output of the model and analysis.

### 3. Modeling and Analysis

In this phase, we use many methods on retrieving information of the data such as grouping and joining data to set the analysis level (NFT / Collection / Owner). In the modeling process, we use unsupervised learning on machine learning modeling, that is clustering using K-Means. From this clustering process, we perform cluster analysis on each cluster.

Besides that, we also perform analysis on the columns based on the analysis plan. From this modeling and analysis output, we also give real world action recommendations for the users.

# Assumptions

These are the assumptions that we used throughout the whole workflow, from EDA until modeling and analysis :

1. Unique identifier for each NFT is the combination of “asset\_contract\_address” and “asset\_token\_id”.
2. Each unique creator (represented as “creator\_id”) can be uniquely identified using “asset\_contract\_address”.
3. The sequence of NFT processes is created, offer\_entered, successful, transferred.

# Results

## Analysis

### 1. NFT Creator Segmentation and recommendations (1)

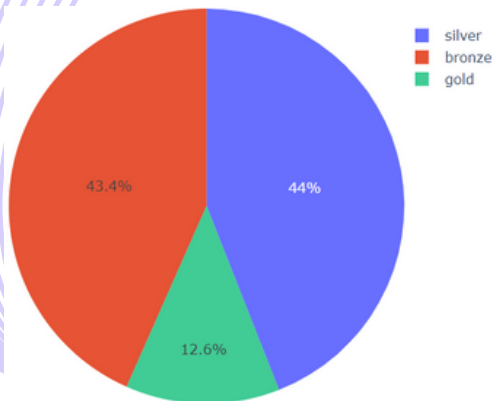


Figure 2. Cluster Proportions

From the KMeans Clustering Model output, we get 3 segments that are Gold, Bronze, and Silver Creator respectively.

The Silver and Bronze creators dominated the creator in Opensea with 44% and 43.4%, followed by Gold Creator at 12.6%

	GOLD	SILVER	BRONZE
Item's Average Price	↑↑↑↑	↑	↑↑
Number of Owners	↑↑↑↑	↑↑	↑
Number of Items in Collection	↑	↑↑↑↑	↑↑
Fee	↑	↑↑	↑

Table 1. The Attributes of Gold, Silver, and Bronze Creator Cluster

The Gold Creator (cluster 0) is the best segment for the NFT Creator. The creators of this segment have a low number of items in their collections but have a high number of ownership compared to other segments. This indicates that the NFTs from Gold Creator are very well-known and quite rare in the Opensea marketplace. The high item's average price also solidifies the top position of these creators.

The Silver Creator (cluster 2) is the common level of NFT Creator segmentation. The creators in this segment have a moderate number of ownership and low item's average price. Meaning that Creators in this segment are quite well-known to the market. The high number of items in their collections further strengthens the position of this cluster compared to the Bronze Creator.

The Bronze Creator (cluster 1) is the bottom level of NFT Creator segmentation. The creators in this segment have a low number of ownership, but a moderate number of items in their collections, meaning that the NFTs in this segment are not as attractive as the first two segments in the Opensea marketplace.

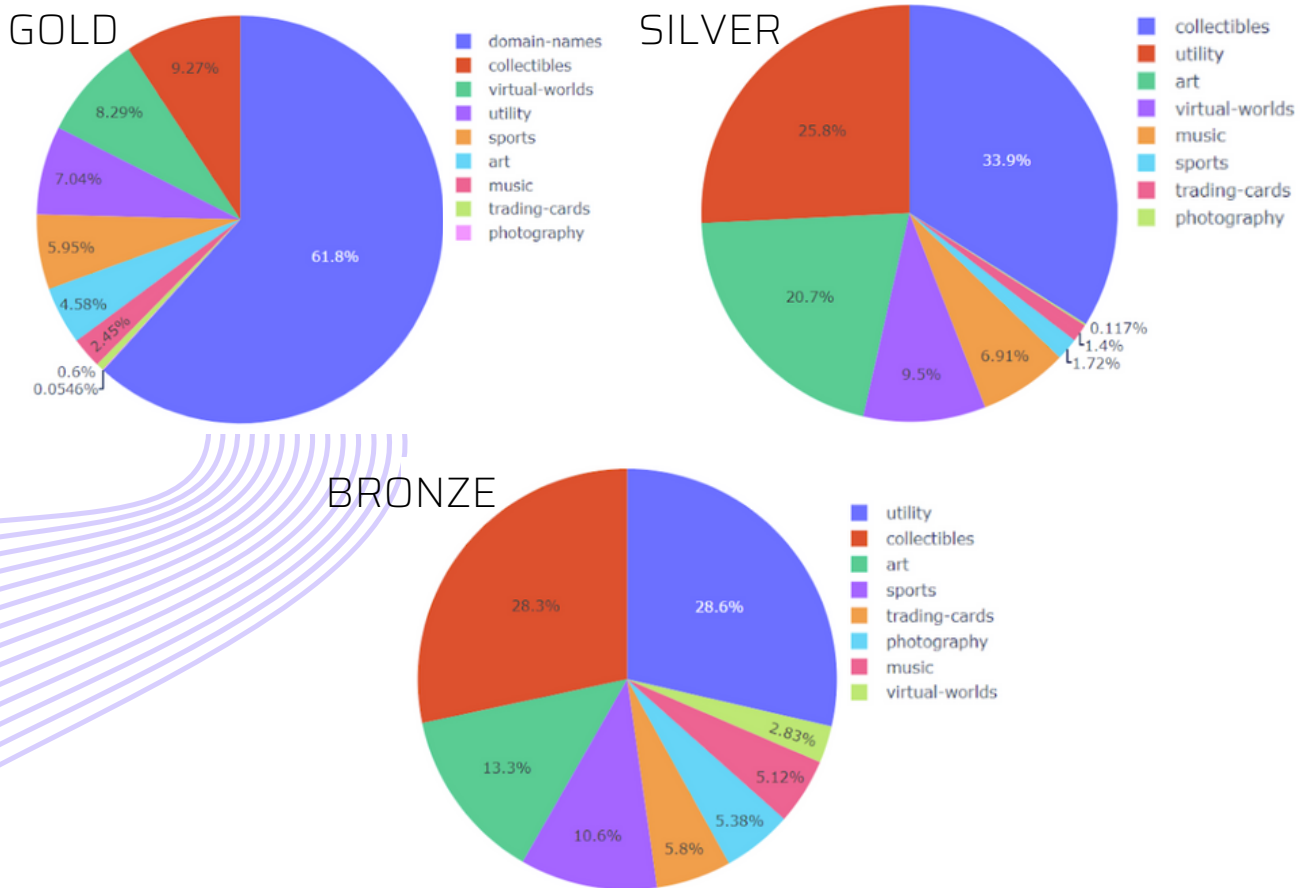


# Results

## Analysis

### 2. NFT Creator Segmentation and recommendations (2)

Inside the 3 segments, we can get some valuable informations regarding the creator.



domain\_names is the type of NFT that dominates the Gold Creator cluster, followed by collectibles in second place.

utility and collectibles are the two most dominating category of Silver and Bronze Creator cluster

Generally speaking, collectibles can be considered as the most wanted type of NFT, followed by utility and art.



# Results

## Analysis

### 3. Number of transactions from 23 January 2018 - 6 March 2022

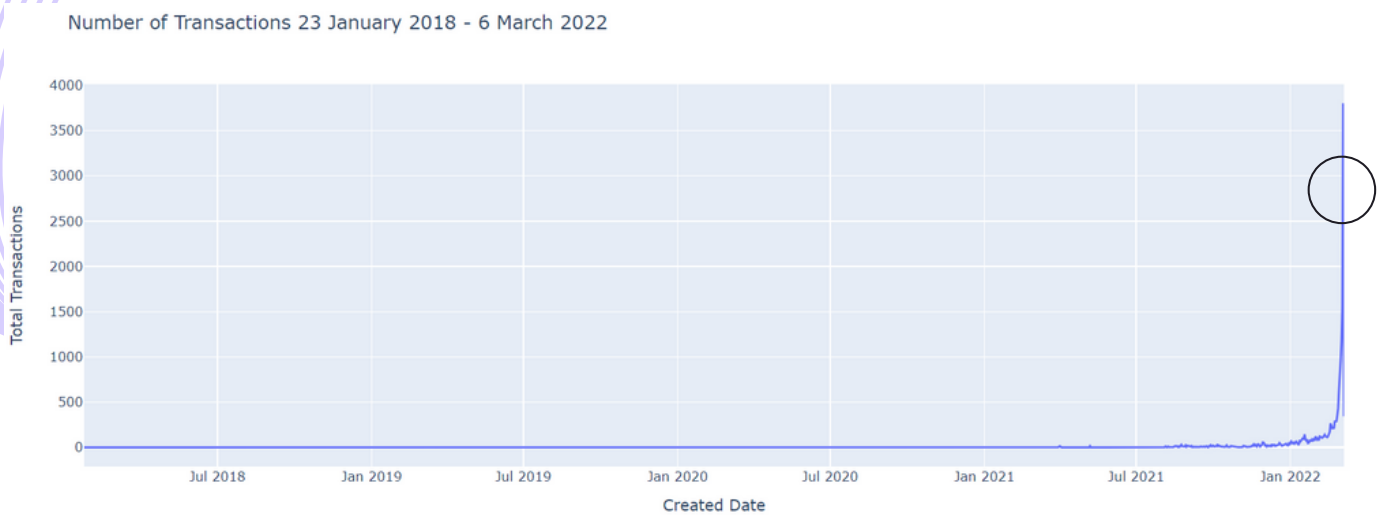


Figure 1. Total Transactions from 23 January 2018 - 6 March 2022

From this graph, it can be seen that the NFTs started to boom recently (approximately from the end of December 2021). At the time this data was taken, the peak was on March 5, 2022, with a total of 3801 successful transactions.

There are certain downfalls on March 6, 2022, because of the incomplete process of getting the data (not taking the full time of a day). Estimating with ratio, on March 6, 2022, there will be an increase in the number of transactions from the previous day, estimated to reach a total of 4128 successful transactions.

Seeing this up-trending trend, it will be great momentum for creators to start creating NFT projects in this period (April - May 2022).

# Results

## Analysis

### 4. Market Time Distribution

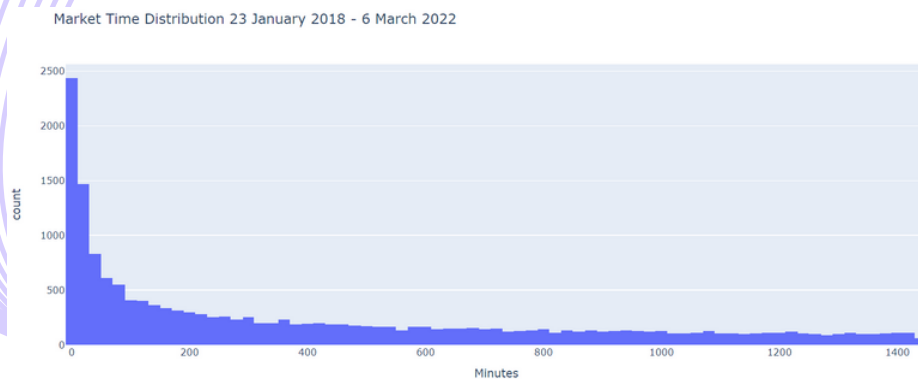


Figure 6. Market Time Distribution

The data and graph showed that most of the NFTs are sold in 1 - 150 minutes (+- 1-2 hour) after being listed in the marketplace.

### 5. Cryptocurrency for NFT Payment

Cryptocurrency for NFT Payment

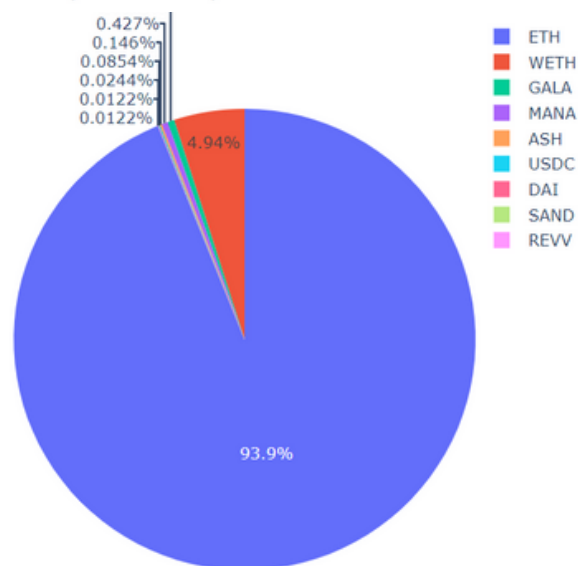


Figure 7. Cryptocurrency Proportions for NFT Payment

ETH really dominated the type of cryptocurrency that was used for payment in Opensea with 93.9% proportion, followed by WETH in second place with only 4.94% proportions. This indicates that ETH is the most reliable type of cryptocurrency for payment of NFTs transactions.

### 6. Number of Sales per NFT Category Distribution

Trading cards is the most popular and wanted category with 63,000 sales, followed by virtual-words, art, utility, and collectibles. The rest of the categories only have sales under 5,000 sales.

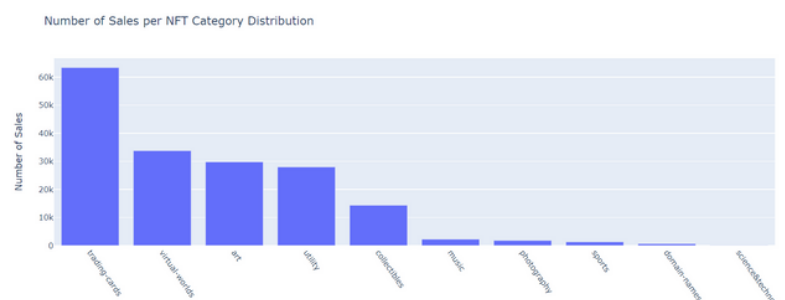


Figure 8. Number of Sales Distribution

# Results

## Analysis

### 7. Total Last Sale Price per NFT Category Distribution

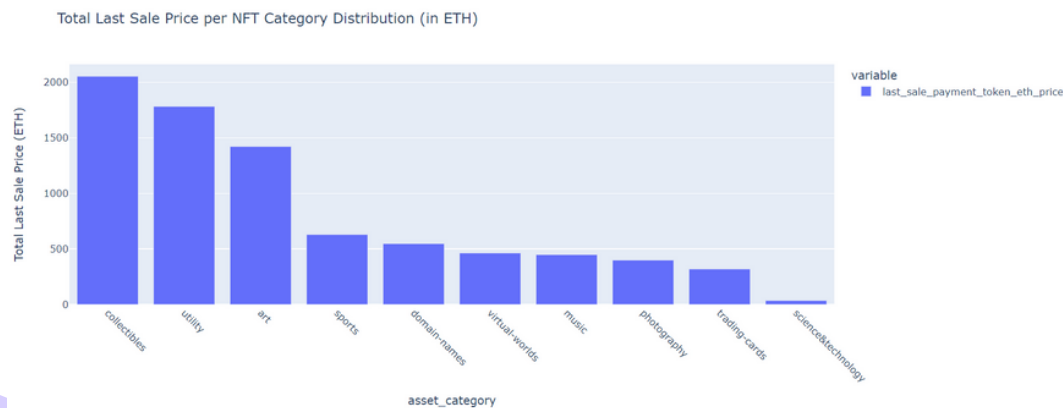


Figure 9. Total Last Sales Distributions

Collectibles become the most expensive in terms of total last sale price with a total of 2,053 ETH.

### 8. Presale asset proportion & Asset contract type proportion

Presale Asset Proportion

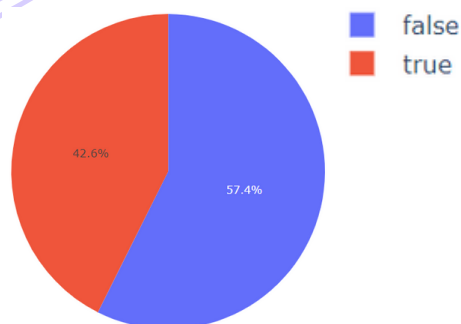


Figure 10. Presale Asset Proportion

- Around 42% of all the NFTs are presale. This is equal to 7,049 NFTs. Meanwhile, the other 58% (equal to 9500 NFTs) are not presale.

Asset Contract Type Proportion

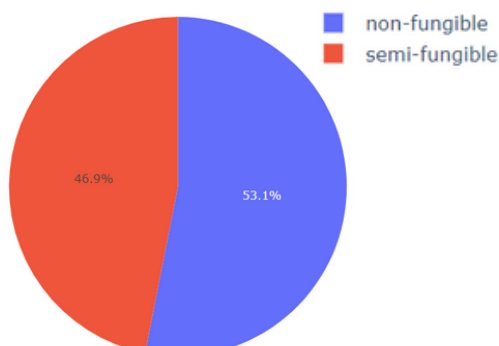


Figure 11. Asset Contract Type Proportion

- Around 53% of all the NFTs in Opensea have non-fungible type of asset contract. This is equal to 8,787 NFTs. Meanwhile, the other 47% (equal to 7762 NFTs) have semi-fungible type of asset contract.

# Results

## Analysis

### 9. Relationship Between Event Type, Auction Type, and Price Difference

Sankey Diagram of Event Type - Auction Type



Figure 11. Sankey Diagram from Event Type to Auction Type

Sankey Diagram of Auction Type - Price Difference

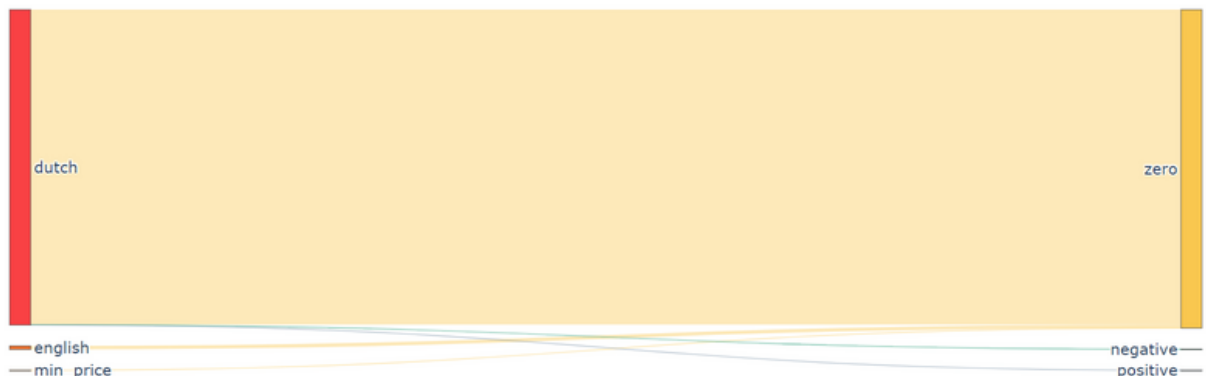


Figure 12. Sankey Diagram from Auction Type to Price Difference

It is clear that dutch is the preferred type of auction events favor by users (sellers) in Opensea, with a total number of 41,2k dutch auction events. Around 99.76% of these events have zero price difference between their starting price and their ending price. This means that almost all NFTs at dutch auctions are very attractive because users (buyers) do not consider waiting for prices to drop from their starting prices.

# Results

## Analysis

### 9. Volume Statistics of Collections

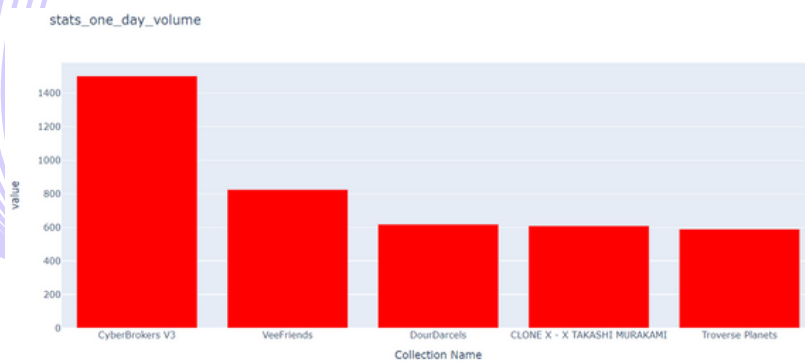


Figure 13. Total Trade Volume for Collections in days

CyberBrokers V3 has the most trade volume in weeks, followed by CryptoPunks and Dippies.



Figure 14. Total Trade Volume for Collections in weeks

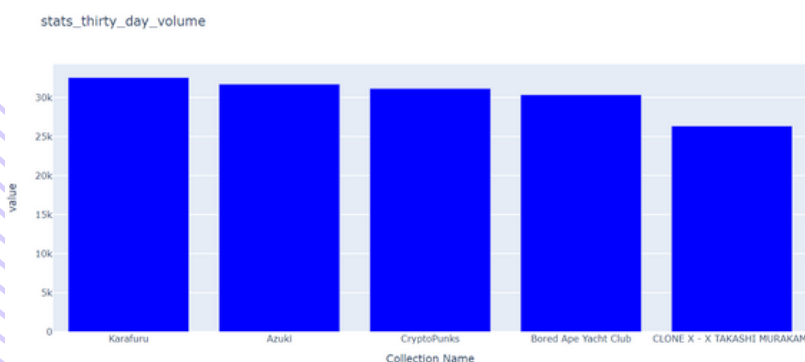


Figure 15. Total Trade Volume for Collections in months

Karafuru has the most trade volume in months, followed by Azuki and CryptoPunks.

# Results

## Analysis

### 10. Volume Change Statistics of Collections

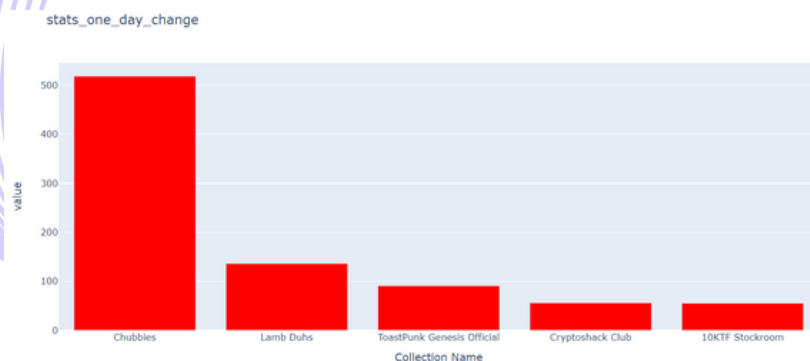


Figure 16. Total Trade Volume Change for Collections in days

Chubbies has the most trade volume change in days, followed by Lamb Duhs and ToastPunk Genesis Official.

OxMAYC Official has the most trade volume change in weeks, followed by Tokenmon and Dual Soul.

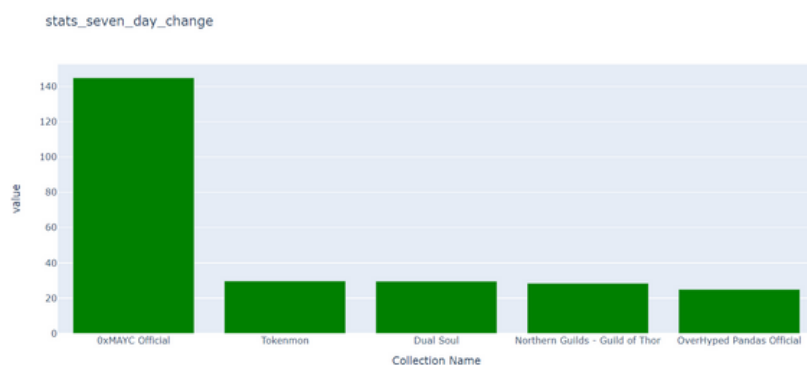


Figure 17. Total Trade Change Volume for Collections in weeks

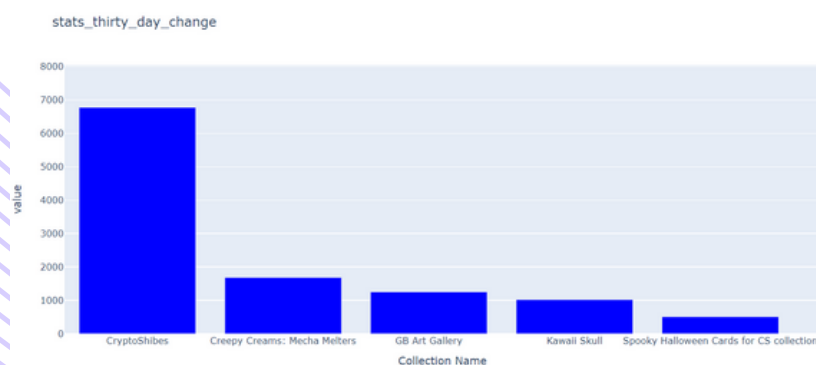


Figure 18. Total Trade Volume Change for Collections in months

CryptoShibes has the most trade volume change in months, followed by Creepy Creams: Mecha Melters and GB Art Gallery.

# Results

## Analysis

### 11. Sales Statistics of Collections

Dour Darcel's has the most number of sales in days, followed by Troverse Planets and Parallel Alpha.

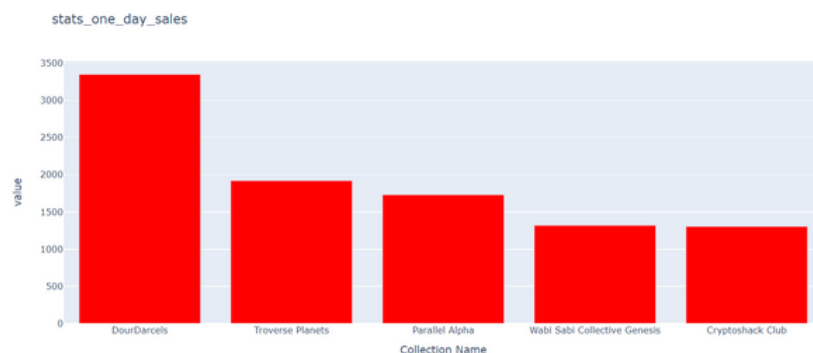


Figure 19. Total Sales for Collections in days



Figure 20. Total Sales for Collections in weeks

Dippies has the most trade volume change in weeks, followed by Parallel Alpha and The Walking Dead Official.

Rarible has the most trade volume change in months, followed by tubby cats by tubby collective and Doogies.

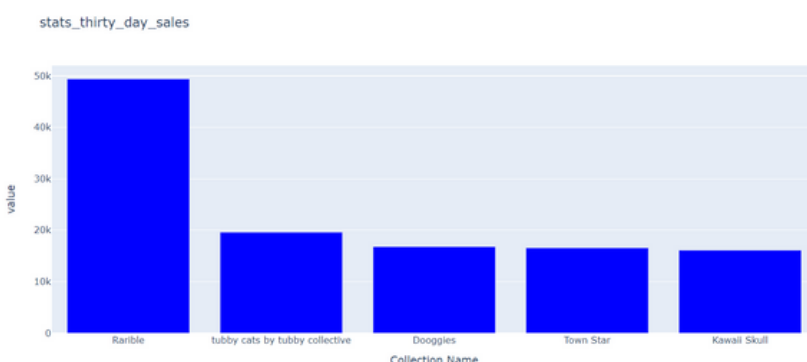


Figure 21. Total Sales for Collections in months



# Results

## Analysis

### 12. Average Price Statistics of Collections

Bored Ape Yacht Club has the highest average price in days, followed by CryptoPunks and VeeFriends.



Figure 22. Average Price for Collections in days

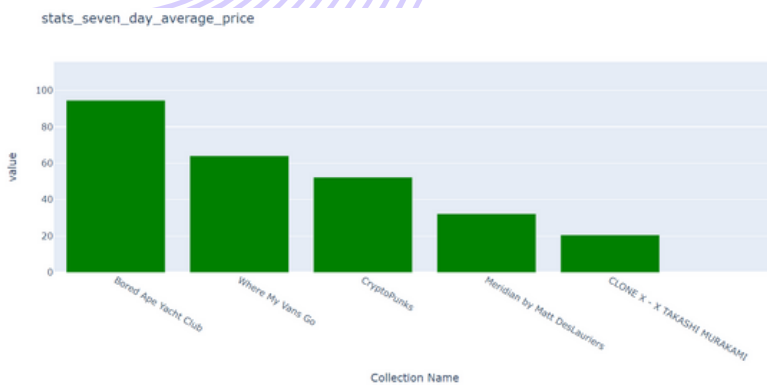


Figure 23. Average Price for Collections in weeks

Bored Ape Yacht Club has the highest average price in months, followed by CryptoPunks and Where My Vans Go.



Figure 24. Average Price for Collections in months

## Results

# Dashboard

Dashboard that consist of information regarding the collections

Choose Collection :

0x1 Force

0xAzuki

0xBANC

**0xMAYC Official**

0xMAYC V2

0xmfers

0xmusic

1/1 by Nftforlife1

1xMerch

2details

4th year of PSUPS, term papers

8-Bit Sport - Football

8bitTeeTimeNFTGolfers

8SIAN Main Collection

8SIAN Women

10KTF

10KTF Stockroom

55unity

57 Moments

90s Babes NFT | BAE

321 Football Legends

416 Connecting

2112 nra Genesis Cryptorunners

426c TRENDY GANG SERIES01 featuring CL

TronWars

Immortal Black

The Odd District

"A world of colors" by Cinthia Ponce V3

"I'm Spottie"

(un)lost architecture NFT - Vol. 1

COLLECTION INFORMATION

**0xMAYC Official**

DESCRIPTION

Website: <https://0xmayer.com/>

PROJECT'S PROFILE

Total supply	Wallets holding	Unique Wallet %
10,000	2,826	28.26%

MARKET STATISTICS

Floor price	Average price	Market capital
0.0	0.0	295.8

HISTORICAL PRICE AND VOLUME

	1 day	7 day	30 day
Average Price	0.00	0.03	0.03
Volume Change	-0.77	144.98	0.00
Number of sales	187.00	6,016.00	6,157.00
Volumes	6.96	177.94	179.16

Social Media Availability

Instagram	-	Telegram	-
Twitter	-	Medium	-
Discord	-		

EXTERNAL URL



SCAN TO ACCESS THE DASHBOARD!

or

[click here!](#)

# Conclusion and Recommendation

---

- From these results, we recommend people who want to create and sell domain\_names type of NFT follow the traits and characteristics of the creator in the Gold Creator cluster.
- Creators who wish to create and produce NFTs in the near future can try the collectible or utility category as both of them are currently leading in terms of asset type in every cluster (Gold, Silver, Bronze).
- If you are a creator who wants to create a new project, you can refer to being one of the segments on the market. The most common creator is on the silver and bronze segment, it is harder to become the gold creator so you can consider the chances and resources you have to be the creator on one of the segments.
- It is really important on having community beforehand before you launch an NFT project.
- If your NFTs are owned by many people and quite rare (meaning that your NFTs are highly coveted by many people), then you can try to increase the price for your next NFT.
- Try to make a limited edition type of NFT. This will make your NFT rare and appealing to users (buyers).
- Start to launch the NFT project in the period April - May 2022 for grabbing the momentum.
- Using ETH as the cryptocurrency for the NFT Payment
- For reaching a high number of sales on NFT, create NFT on category: trading-card/virtual-worlds/art.
- For reaching a high number of NFTprice, prefer choosing collectibles/utility/art as the NFT category.
- Use dutch auction if you want to sell your NFT via auction.
- On seeing how good a collection is, you can consider how many wallets are in the collection. The higher the wallet percentage, the lower the risk of getting a high FOMO collection (A collection that really depends on the public buying condition).
- You can consider 1-1.5 hours of sold time as the parameter of your product categorized as popular NFT.

# Bibliography

- Rosen, P. (2022). *Gary Vaynerchuk says 98% of NFT projects will fail after the gold rush fades. Here's why 2 experts think he might be right.* <https://markets.businessinsider.com/news/currencies/gary-vaynerchuk-nfts-experts-forecast-market-crypto-fail-protocollabs-veefriends-2022-2>
- Enjinstarter. (2021). *What makes a NFT project fail or succeed?*. <https://medium.com/enjinstarter/what-makes-a-nft-project-fail-or-succeed-c8673f42beb8>
- Browne, R. (2022). *Trading in NFTs spiked 21,000% to more than \$17 billion in 2021, report says.*. <https://www.cnbc.com/2022/03/10/trading-in-nfts-spiked-21000percent-to-top-17-billion-in-2021-report.html#:~:text=Trading%20in%20nonfungible%20tokens%20hit,increasingly%20warming%20to%20the%20market>
- Centieiro, H. (2021). *What is a Dutch Auction and Why it Matters in the NFT Space?*. <https://medium.com/geekculture/what-is-a-dutch-auction-and-why-it-matters-in-the-nft-space-59d5d26369f9>