

NFT Marketplace DAPP

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ABSTRACT:

Non-fungible tokens (NFTs) are cryptographic assets on a blockchain with unique identification codes and metadata that distinguish them from each other. Tokenizing these real-world tangible assets makes buying, selling, and trading them more efficient while reducing the probability of fraud. NFTs can also function to represent individuals' identities, property rights, and more. In order to buy and sell these NFT's we need to develop a blockchain based online platform. The Non Fungible Token marketplace is booming. Basically, the Marketplace is an online platform where users/artists can buy or sell non-fungible art pieces and earn cryptocurrency, e.g. Ethereum. Originally, NFTs could be purchased directly from the blockchain. That has changed over the last few years. Now, users can sell and buy NFTs through a marketplace. When someone puts NFTs up for sale, people can place bids until the highest bidder wins. So one can earn millions simply by buying and selling NFTs.

I. INTRODUCTION

Human beings have evolved and so did the ways in which we conducted business. Early huntergatherers lived by a survival instinct and as a societal means used modes of exchange like favours or obligations. The barter system was the most primitive state of value exchange, even in today's context in prisons, inmates use certain things as a form of micro-economy.

The early definition of the internet streamlines a huge network of computers connected all over the world facilitating information exchange, theoretically Internet is decentralised, but a small concentration of organisations influences unprecedentedly over a large fraction of the Internet. But in the current context, blockchain is being hailed as a meritocratic technology promising power back to the people. With newer forms of algorithms, blockchains create

reward-based incentives via a quantifiable performance of the actors in the network. Blockchain can be visualised simply as a transcript or spreadsheet of transactions between 12 people but the characteristic nature of it is the book-keeping mechanism that is publicly controlled. This literature survey is aimed at questioning the nuances of NFTs (Non-Fungible Tokens) as a means to recreate ownershipstructures through the tokenisation of commodities, which have been recently included as an extension of blockchain utility.

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function to represent individuals' identities, property rights, and more. In order to buy and sell these NFT's we need to develop a blockchain based online platform. The marketplace is stored in a public blockchain and contains information about:

1. Who and when created an asset.
2. Who and when bought the asset.
3. At what price the asset was bought.
4. Who owns the asset at the moment.

II. LITERATURE REVIEW ON NFT & CONCEPT OF TOKENIZATION

NFTs are data units stored on a blockchain ledger certifying the authenticity of a digital asset, it provides a certificate of ownership to the asset holder. NFTs being unique has one identity only and are therefore scarce. The concept of scarcity creates a perfect marketplace for digital creators and consumers. NFTs are an identity on the digital ledger proving proprietorship. The concept of tokens has changed how we value objects in the real world. We use tokens in our day-to-day lives such as identity cards, driving licenses, and airline tickets. They can be of different types for instance some are permanent, and some are temporary. Each has an attribute, and these attributes are embedded on the universal blockchain-based ledger, for instance, NonFungible Tokens can vary from providing access rights to just a visual digital artwork proving authenticity to allowing users to access a certain business case, like an airline ticket; contemplating different types of tokens such as access tokens, security tokens, cryptocollectables, identity tokens, etc. The

III. IMPLEMENTATION OF THE MARKETPLACE

The Full-stack NFT marketplace project is divided into 3 parts:

attribute of an airline ticket is that it allows us to use the services of an airline, once the job is done the ticket is of no use. In the case of NFTs, the same ideology is used but in a digital nature. What gives NFTs their value lies in their rarity, expected future value, and provenance. Provenance is simply the certificate of ownership, history of ownership. A classic example of this is that the Mona Lisa painting has been in the hands of great kings and that gives it the right to be valuable. Not simply because it is a great work of art which it certainly is, the authenticity behind it has been certified by ownerships, and the hands of possession have transferred along with history. NFTs are blockchain-based tokens representing ownership over content creating value for many. Blockchain has immense potential and NFTs however being a small piece of the pie, there are significant ways this could refurbish societal shifts.

In this current state of transition, NFTs are becoming a gateway to digitalise everything into tokens or behave as a 'value machine of everything'. It is anticipated that NFTs will bridge the value between the real and the digital worlds, they would connect physical and digital entities, thus pipelining value exchanges. The emerging parallel worlds are an interesting phenomenon to look at since linking real and digital worlds would reform the ways of perceived mass value. If ownership is transferred in the digital world, it holds tremendous perceived value in the real world, the corresponding ownership structures also change, and it is quite complex to determine.

1. In the first section, NFT marketplace solidity smart contract is built.
2. Building frontend of NFT marketplace using react.js , next.js, node.js, HTML, CSS, and JavaScript .
3. Back-end is built using Express and MongoDB.



Blockchain is a decentralized architecture, and oftentimes public, distributed immutable ledger, providing privacy and security, consisting of records called blocks that is used to record transactions across many computers so that any involved block cannot be altered retroactively, without the alteration of all subsequent blocks. Being decentralised every individual in the network partakes in the transactional processes, it is transparent allowing each individual in the

network to view the transactions and it is verifiable thus preventing counterfeit transactions Blockchains are currently in many forms with the first being introduced as Bitcoin by the pseudonymous individual Satoshi Nakamoto. Probably Nakamoto realised the importance of a decentralised infrastructure in the current sociological order and dissipated their idea through this brainchild, a payment system with no centralised actors governing it.

Features of Blockchain:

 <p>A digital ledger that keeps a record of all transactions taking place on a peer-to-peer network</p>	 <p>All information transferred via blockchain is encrypted and every occurrence recorded, meaning it cannot be altered</p>	 <p>It is decentralized, so there's no need for any central, certifying authority</p>	 <p>It can be used for much more than the transfer of currency; contracts, records and other kinds of data can be shared</p>	 <p>Encrypted information can be shared across multiple providers without risk of a privacy breach</p>
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IV. GOALS AND DISCUSSIONS

- The major goal of NFT marketing is to reach a wider audience, establish more trusting relationships, and increase revenue.
- To get involved in popular platforms and expanding trends when it comes to marketing strategies.
- To expand the audience reach, from digital creators and art collectors to entrepreneurs, etc. The more NFTs are created, the more reach is obtained.
- To provide more experience to the community. There will be a huge interest generated towards the brand.
- To allow digital information to be recorded and distributed, but not edited, thereby providing additional security.

V. APPLICATIONS

- The project enables us to represent ownership of digital assets such as art, music, or video. By buying an NFT, you would own that piece of property and would be able to sell it or rent it out to other users.
- Provides the option to create digital collectibles. In this way, it can be sold to a higher value to secondary markets.

VII. FUTURE ENHANCEMENT

There are several layers of the NFT scenario that are still underexplored such as the adoption rates. The linking of on-chain and off-chain data structures through blockchain oracles is yet in the phase of infancy, technical challenges lie underneath this area. Further improvements like implementation of the marketplace in mobile applications could also be done. Community building through NFTs shows promising evidence that can be tested through a more qualitative analysis based on

- Represents ownership of physical assets. For example, the NFT ownership of a certain model of a car will be stored on a blockchain and would be transferrable to another owner after its sold.
- Can be used in gaming applications as a character of a game can also be transferred to another user just like trading.

VI. CONCLUSION

The current knowledge around NFTs and blockchain is quite a niche, at least it is likely in a phase of speculative nature of value production and efforts were put towards filling the gaps of how end-users perceive the notion of value through ownership of NFTs. The stakeholders of the research would be academicians, public and private companies in the blockchain industry seeking to build products around NFTs, students and anyone looking forward to building knowledge from a metaperspective trying to understand the value behind NFTs. The study sheds light on the improvement of the current products and processes enabling blockchain developers to carefully select and build use cases that provide the true value of NFTs.

constructs of individuality and exclusivity. Future studies can reinspect on a similar problem by expanding the theoretical framework or by constructing the same research context from a classical economics perspective and providing more evidence on the same. A potential study would also be towards evaluating NFT uses cases as well in the current market.

VIII. REFERENCES

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