NFT PLATFORM USING BLOCKCHAIN

Sanjeet Dwivedi*1, Priyanshu Verma*2, Jivan Raundal*3,
Bauddhik Srivastava*4, Prof. R.H. Borhade*5

*1,2,3,4Students, Department Of Computer Engineering, Smt. Kashibai Navale College Of Engineering, Pune, Maharashtra, India.

*5HOD, Department Of Computer Engineering, Smt. Kashibai Navale College Of Engineering, Pune, Maharashtra, India.

ABSTRACT

Before a good can be purchased, it must be understood who has the authority to sell it, and once a purchase has been made, ownership must be transferred from the seller to the purchaser. The solution provided by NFTs allows parties to agree on a common agreement i.e., smart contract of what constitutes ownership. Digital artists truly faced many problems in the ownership and credit of their artworks in fast growing digital world. They are worried to conduct online exhibition of their artworks because it can be easily forged or replicated by someone. The same problems apply to real-world works of art, although things are a bit simpler when it comes to determining their authenticity. Blockchain is a revolutionary technology and will have great positive effects in our business environment soon. NFT stands for Non-Fungible Token. An NFT can be considered just a digital form of real-world entities. They are traded online, generally with different types of cryptocurrencies.

Keywords: NFT, Blockchain, Web3, Decentralized Applications (Dapps), Metamask.

I.   INTRODUCTION

From technical perspective point of view, NFTs are non-interchangeable units of data stored on blockchain, making them resistant to tampering, destruction, or replication. NFTs can be verified by the blockchain technology, giving them extrinsic value as well. Non-Fungible Token (NFT) is a unique form of digital asset on Blockchain. These digital assets are not interchangeable, unlike other types of crypto currency. It provides ownership authentication. Each NFT is a unique asset and can't be recreated or replaced. The following are examples of NFT types: image, file, cartoon, virtual real estate, pet, video, trading card. A unique business space for artists and creators to showcase their creations or collections- which offers newcomers to involve with the digital business field. In response, a revolution is opening up new opportunities for artists to produce and profit from their work, while also providing collectors with complete transparency regarding the authenticity and origin of their purchases. Digital art, collectibles, creative extensions of music, a synthesis of all three, or completely original and unheard-of compositions are all examples of NFT assets. By modifying NFTs in fresh and creative ways, creators continue to push the limits of innovation. NFTs are important because they open a whole new world of possibilities for digital ownership and transactions. With NFTs, user can own digital assets that are truly unique and have real value. This includes everything from digital arts and collectibles to in-game items and virtual land.

II.   LITERATURE SURVEY

This paper examines the impact of NFTs on the art industry. The author discusses the advantages and limitations of NFTs in the art market and analyzes the current state of NFT marketplaces for art. [1]

This survey paper provides a comprehensive overview of non-fungible tokens (NFTs) on the blockchain. It covers the basics of NFTs, their features, use cases of NFTs. The authors also discuss the current state of NFT marketplaces and the challenges they face.[2]

This survey paper focuses on the use of NFTs for digital assets. The authors discuss the advantages and disadvantages of using NFTs in digital assets and examine the current state of NFT marketplaces for digital assets.[3]

This paper examines the potential of blockchain technology and NFTs in the music industry. The authors discuss the use cases of NFTs in the music industry and analyze the current state of NFT marketplaces for music assets. [4]

This paper provides an overview of blockchain-based non-fungible tokens. The authors discuss the technical aspects of NFTs and their potential applications. They also examine the current state of NFT marketplaces and the challenges they face. [5]

This paper discusses the use of NFTs as a solution for digital rights management. The authors examine the technical aspects of NFTs and their potential applications in the entertainment industry. They also analyze the current state of NFT marketplaces for digital assets. [6]

This paper discusses on non-Fungible Tokens (NFTs) have gained significant attention in recent years as a new way of representing digital ownership and uniqueness in the digital world. NFTs are unique, digital assets that use blockchain technology to verify ownership and transfer of the asset. However, there are also several challenges and limitations associated with NFTs. One of the primary challenges is the environmental impact of the blockchain technology used to create and manage NFTs. The high energy consumption of the blockchain has been a topic of concern, and some have questioned the sustainability of the technology.[7]

This paper discusses One of the most popular blockchain platforms for creating and managing NFTs is Ethereum. Ethereum is a decentralized, open source blockchain platform that allows developers to create and deploy smart contracts and decentralized applications (dApps). There are several NFT standards on Ethereum, including ERC-721 and ERC-1155. ERC-721 is the most widely used standard for creating NFTs and is used for creating unique, indivisible assets such as digital art, collectibles, and in-game items.[8]

This paper discusses on blockchain technology is a distributed ledger technology that enables secure and transparent transactions between parties without the need for intermediaries. The technology uses cryptography to create a decentralized network of nodes that work together to validate and record transactions on the network. Overall, blockchain technology has the potential to revolutionize various industries by improving efficiency, security, and transparency.[9]

These papers provide a good starting point for a literature survey on NFT marketplaces using blockchain. They cover a wide range of topics and provide insights into the current state of NFT marketplaces and the challenges they face.

III. MOTIVATION

The emergence of Non-Fungible Tokens (NFTs) has revolutionized the digital art industry by providing a secure and transparent way for artists and creators to sell their unique works and retain ownership of their intellectual property. NFTs are cryptographic assets that represent ownership of a unique digital asset, such as artwork, music, or videos, and are traded on blockchain-based marketplaces. The development of NFT marketplaces has led to a new era of democratization in the art world, where artists from all over the world can reach global audiences and earn money for their creations without relying on traditional art institutions. The use of blockchain technology ensures that each NFT is unique, traceable, and immutable, which provides a secure way for artists to authenticate their work and avoid fraud. Research in the field of NFT marketplaces is essential to understand the impact of this technology on the art industry and the wider economy. By studying the behavior of buyers and sellers on NFT marketplaces, researchers can gain insights into the factors that affect the demand and value of NFTs. This knowledge can be used to improve the design of NFT marketplaces and make them more efficient, transparent, and user-friendly. Moreover, research in the field of NFT marketplaces can have implications beyond the art industry. The use of NFTs can revolutionize the way that other digital assets, such as real estate, collectibles, and patents, are traded and verified. This can lead to the creation of new markets and business models that are more secure, efficient, and accessible. In summary, the emergence of NFT marketplaces has created new opportunities for artists and creators and has the potential to transform the art industry and other sectors of the economy. Research in this field is essential to understand the impact of NFTs on the art market and to explore the potential of this technology for other applications.

IV. OBJECTIVE

The objective of this research paper is to investigate the impact of Non-Fungible Tokens (NFTs) on the art industry and to analyze the effectiveness of NFT marketplaces as a new model for buying and selling unique digital assets. Specifically, this paper aims to: Identify the key features and benefits of NFTs as a new asset class for digital art and other unique digital assets. Explore the growth and development of NFT marketplaces and the impact they have had on the traditional art market. Analyze the behavior of buyers and sellers on NFT

marketplaces and the factors that affect the demand and value of NFTs. Investigate the role of blockchain technology in providing a secure and transparent platform for NFT trading. Evaluate the potential of NFTs and NFT marketplaces as a new model for buying and selling other unique digital assets, such as collectibles, patents, and real estate. Provide recommendations for the design and improvement of NFT marketplaces to make them more efficient, user-friendly, and accessible. Overall, this research paper aims to contribute to the growing body of literature on NFTs and their potential impact on the art industry and the wider economy. By providing a comprehensive analysis of NFT marketplaces, this paper can inform future research and policy discussions on the use of NFTs as a new asset class and their potential for transforming the way that unique digital assets are traded and verified.

V.   PROPOSED SYSTEM

A NFT (Non-Fungible Token) marketplace/platform using blockchain can be built using the following system:

Smart Contract Development: The first step is to develop smart contracts that will enable the creation, transfer, and ownership of NFTs on the platform. The smart contract will also include the rules and conditions for the sale of NFTs, including the percentage of the sale that goes to the platform and the creator of the NFT.

User Registration and Wallet Creation: Users will need to register on the platform and create a digital wallet to store their NFTs. This wallet will be linked to the user's blockchain address, and it will be used to make transactions on the platform.

NFT Creation and Listing: Users can create their own NFTs by uploading their digital artwork, music, videos, or other unique digital assets to the platform. Once the NFT is created, the user can list it for sale on the platform, specifying the price and the conditions of the sale.

Marketplace Listing and Discoverability: The NFTs that are listed for sale on the platform will be displayed in the marketplace for buyers to discover and browse. The platform can also implement a search and filter feature to help users find specific NFTs.

Auctions and Bidding: The platform can enable auctions for NFTs, where users can bid on an NFT, and the highest bidder wins the NFT. The platform can also implement a feature where users can make offers to the NFT owner and negotiate the price.

Payment and Transaction Processing: The platform will process transactions using cryptocurrency, which will be sent from the buyer's wallet to the seller's wallet upon completion of the sale. The platform can also deduct its percentage of the sale and transfer it to the platform's wallet.

Ownership Transfer: Once the NFT is sold, the ownership will be transferred from the seller's wallet to the buyer's wallet. This transfer will be recorded on the blockchain, providing a permanent record of the ownership transfer.

Withdrawal and Transfer of Funds: Users will be able to withdraw their cryptocurrency from their wallet or transfer it to other blockchain wallets.

Analytics and Reporting: The platform can provide analytics and reporting tools to users, allowing them to track their sales, bids, and offers. The platform can also provide metrics on the overall performance of the platform.

Security and Maintenance: The platform must ensure the security of user data and NFT assets. It will also require ongoing maintenance and updates to keep up with new technologies and trends.

VI.   CONCLUSION

In conclusion, NFT (Non-Fungible Token) marketplaces/platforms are a rapidly growing sector within the blockchain industry. NFTs allow for the creation, transfer, and ownership of unique digital assets, providing creators and collectors with new opportunities for monetization and ownership. The development of a NFT marketplace/platform requires the creation of smart contracts, user registration and wallet creation, NFT creation and listing, marketplace listing and discoverability, auctions and bidding, payment and transaction processing, ownership transfer, withdrawal and transfer of funds, analytics and reporting, and security and maintenance.

Successful NFT marketplaces/platforms will provide a user-friendly experience, a broad range of NFT assets, and robust security measures to protect user data and NFT assets. Additionally, the platform's ability to provide

liquidity to its users will be a critical factor in its success. As the NFT market continues to grow and evolve, it is essential to stay up to date with emerging technologies and trends. As new applications of blockchain technology emerge, the potential for NFTs to expand into new areas, such as gaming and virtual reality, will continue to increase.

ACKNOWLEDGEMENTS

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