

NFT Based Secure Platform for Copyright Images

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Abstract: *Artists are digitally disenfranchised, rampant online sharing and ease of copying make protecting their work from unauthorized use an uphill battle. Digital art is effortlessly duplicated, shared, and manipulated without credit or compensation, even leading to individuals profiting off stolen work. This widespread issue, particularly plaguing social media, demands a solution. We propose a blockchain-based platform utilizing Non-Fungible Tokens (NFTs) to empower artists. By creating NFTs for their art, they claim irrefutable ownership, authenticity, and copyright, enabling secure sales via cryptocurrencies and combating unauthorized use. This innovative approach empowers artists to thrive in the digital age*

Keywords: Non-Fungible Tokens, Blockchain technology, Digital assets, Digital art, Copyright.

I. INTRODUCTION

A generation of digital artists faces a double-edged sword: creation tools like Photoshop and platforms like Etsy offer accessibility but lack protection. Their art, easily downloaded without permission, is vulnerable to misuse and copyright infringement. Manipulation further diminishes their work, and widespread online sharing makes unauthorized use difficult to track. While copyright exists, enforcement is complex. We address this with a solution: our platform generates unique identifiers and detailed timelines for each artwork, transforming them into NFTs on a blockchain. This verifiable ownership record, visible with the NFT's age, empowers artists to claim ownership and combat infringement in the digital landscape.

II. LITERATURE SURVEY

- [1]. This paper delves into Non-Fungible Tokens (NFTs), unique digital assets secured by blockchain technology. While heralded as a lucrative avenue for monetizing digital artwork and other assets, NFTs face criticism for their high energy consumption and potential environmental impact. The paper explores their potential to revolutionize the digital art market but also raises crucial questions about ownership, legitimacy, and the environmental sustainability of blockchain technology.
- [2]. The author investigates the connection between copyright law and non-fungible tokens (NFTs). It makes the case that NFTs present significant problems regarding copyright infringement, moral rights, the control and manipulation of digital art, and the possibility for technical misuse. It also contends that NFTs raise major considerations concerning the ownership and validity of digital art. The article makes the case that it's crucial to think about the moral and legal ramifications of this technology and to create a framework that strikes a balance between creators', owners', and users' rights.
- [3]. The author examines the use of NFTs and semantics to manage copyright in virtual worlds and digital environments. It argues that while NFTs can provide a way for creators to monetize their work and ensure authenticity, they raise important questions around copyright management in the digital age. The paper suggests that using semantics in conjunction with NFTs can improve the management of copyright by effectively identifying and tracking rights holders and their works. It argues that NFTs and semantics combination can revolutionize the way copyright is managed and enables creators to be fairly compensated for their work while also providing access for users to enjoy digital content.

- [4]. This study conducts a systematic review of current research and proposes a future agenda. By analyzing published articles on Web of Science and Science Direct (pre-April 2022), it identifies 13 studies primarily focused on NFT pricing. The authors unveil research gaps and suggest future exploration in areas like asset pricing, tokenomics, risk, and regulation. Highlighting diverse NFT applications in gaming, collectibles, art, and fintech, they link the recent surge to the COVID-19 pandemic and rising digital engagement. However, limited by the need for broader knowledge and the field's inherent cross-disciplinarity, the study recommends focusing research on three key areas: computer science, economics & finance, and law & other relevant fields.
- [5]. The author said that NFTs (Non-fungible Tokens) are distinctive digital objects secured on the blockchain and frequently associated with unique digital content such as music or art. With well-known companies and artists producing NFT collections that may sell for millions or tens of millions of dollars, the NFT market has quickly attracted public attention. NFTs have changed the ticketing system by offering a more secure and memorable alternative to paper tickets, and the application of machine learning algorithms in NFT trading is growing in popularity. Additionally, NFTs can act as a decentralized domain, enabling them to send and receive cryptocurrency payments
- [6]. In the paper, market intelligence for Non-Fungible Tokens (NFTs), which have produced billions of dollars in sales, is examined in relation to the effects of marketplace architecture. Bidding expenses are highlighted by the authors as a crucial component of marketplace design that can impact market intelligence. They conduct their case study on the CryptoPunks marketplace and discover that while a reduction in bidding costs raises listing and sales prices, it has no impact on the volume of transactions. The findings imply that variations in bidding costs among marketplaces may alter market data and affect how NFT market information is interpreted. The study emphasizes how crucial it is to take market design into account when examining NFT market information.
- [7]. In this paper the author gave use of non-fungible tokens (NFTs) to represent and exchange ownership of digital goods, including virtual art, has grown in popularity. They sell artists' work in a digital format while assuring that the ownership and validity of the artwork can be verified by using block chain technology to produce unique, one-of-a-kind digital assets that cannot be duplicated or replaced. NFT use in the virtual art market, however, is still a young and developing field, and there are some issues that need to be resolved, such as the environmental impact of block chain technology, the long-term viability of NFTs as an investment, and the requirement for better understanding of the legal and regulatory framework surrounding NFTs. Despite these difficulties, NFTs have the potential to change the virtual art market and other sectors. However, in order for the NFT industry to grow sustainably and succeed, these difficulties must be taken into account and addressed.
- [8]. The author has discussed the case that NFTs, which employ block chain technology to produce one-of-a-kind digital assets, pose significant issues regarding the ownership and veracity of digital art. NFTs can be an effective tool for artists to sell their creations, but they also present legal issues related to copyright infringement, moral rights, and the extent of copyright protection for digital art. It also draws attention to the moral dilemmas raised by the management and exploitation of digital art as well as the possibility for technology abuse. In spite of the fact that NFTs have the potential to alter the way we view digital art and ownership, the paper's conclusion stresses the need to weigh the moral and legal ramifications of this technology and to create a framework that strikes a balance between the rights of creators, owners, and users.'
- [9]. The author examines how Non-Fungible Tokens (NFTs) fluctuate in value in the market for digital art. In order to comprehend market trends and patterns, it provides an overview of historical data on NFT sales and prices. The research also looks at the variables that influence the revaluation of NFTs, including the

reputation of the artist, the originality of the piece, and the general level of NFT demand. The article comes to the conclusion that the NFT market is speculative in nature and that supply and demand factors determine how valuable NFTs are. It also acknowledges that the industry is still very young and that additional investigation is necessary to properly comprehend the variables influencing the revaluation of NFTs.

- [10]. Exploring the intricate tango between Non-Fungible Tokens (NFTs) and cryptocurrency giants, Bitcoin and Ethereum, this paper analyzes historical data on NFT sales, prices, and their crypto counterparts' dance. Unveiling a complex web of correlations, it examines how artistic prestige, unique work characteristics, and overall NFT demand sway these digital assets' value. While acknowledging a compelling connection, the study underscores the nuanced and multi-faceted nature of this relationship. Highlighting the nascent stage of the NFT market, it emphasizes the need for further exploration to fully grasp the dynamics connecting NFTs, Bitcoin, and Ethereum.
- [11]. This author discusses the risk and return analysis of NFT-based firms listed on cryptocurrency exchanges is conducted in the study. The authors suggest a novel classification of NFTs and discover that over the long run, NFTs produce large returns with an average investment multiple of 40 (or nearly 4,000%). Additionally, they discover that the NFT market segment of cryptocurrencies drives market recovery and delivers returns of almost 350%. The authors discover that NFTs can be used to document, confirm, and trace the ownership of a special item in addition to serving as an evidence of provenance and authenticity. NFTs are protected against being taken or altered by malicious actors since they are stored and exchanged on a blockchain. The analysis comes to the conclusion that adding NFT infrastructure to current blockchains raises their market prices
- [12]. The author focuses on how non-fungible tokens (NFTs) are becoming more and more common and how this has affected the blockchain revolution. It outlines the salient characteristics of blockchain technology and how it affects NFTs, including how popular they are and how they work with smart contracts. The article's second section examines the legal ramifications of NFTs, notably with regard to copyright law and the difficulties involved in creating and dispersing NFTs. It also talks about the effects of buying NFTs.
- [13]. Fueled by blockchain technology, Non-Fungible Tokens (NFTs) offer unique digital certificates of authenticity, empowering creators by linking ownership of digital assets to tamper-proof tokens. While India witnesses a surge in NFT interest, the nascent ecosystem lacks a dedicated legal framework for crypto assets, creating significant legal complexities. This study explores the opportunities and challenges surrounding NFTs within the Indian legal landscape, examining their legitimacy, sustainability, and potential risks under current regulations. With the rise of digital investments and concerns about artist protection, NFTs offer a promising solution, but their viability within the Indian legal system remains shrouded in uncertainty, demanding investigation and potential regulatory adaptation.
- [14]. This paper explores the innovative concept of "property tokenization," where real estate is digitally divided into tradable tokens on a blockchain. This approach, the paper argues, can revolutionize the industry by boosting liquidity, accessibility, transparency, and efficiency. It even holds the potential to promote sustainability and social inclusion. The paper proposes a framework for implementing this system, leveraging GIS and BIM technologies for digital asset management and utilizing smart contracts for automated, verifiable transactions. While acknowledging challenges like legal, technological, and social preparedness, the paper emphasizes the potential economic and environmental benefits, ultimately painting a picture of a transformed future where asset ownership and use are fundamentally reshaped.
- [15]. The rapid rise of NFTs raises concerns about their long-term viability. Critics suspect a bubble, while proponents cite high prices paid for individual NFTs. Unlike cryptocurrencies with inherent value (platform efficiency), NFTs need a different explanation. If viable, NFTs could eventually replace intellectual property

rights (IPRs) systems. This paper explores potential value-generating mechanisms for NFTs, a digitally created token representing a digital asset (not necessarily infringing IPRs) with underlying value. Recorded on a blockchain (currently Ethereum), NFTs are unique and irreplaceable. They are created using numbers, addresses, and URLs for the NFT itself, owner, and underlying asset. Creation is irreversible, with "burning" the only way to render an NFT unusable.

III. CONCLUSION

The burgeoning world of NFTs presents a captivating blend of opportunity and challenge. On the one hand, they offer revolutionary potential to redefine ownership in art, collectibles, gaming, and even real estate, empowering creators and unlocking new investment avenues. The secure and transparent nature of blockchain technology underpins these possibilities. However, sustainability concerns due to energy consumption, speculative market volatility, and a nascent legal landscape pose significant hurdles. Bridging the accessibility gap and fostering user awareness are equally crucial. Moving forward, standardization, eco-friendly solutions, clear regulations, and widespread education will be key to unlocking the full potential of NFTs and ensuring a responsible, inclusive future for this transformative technology.

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