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COMPREHENSIVE STUDY ON USE-CASES OF NFT

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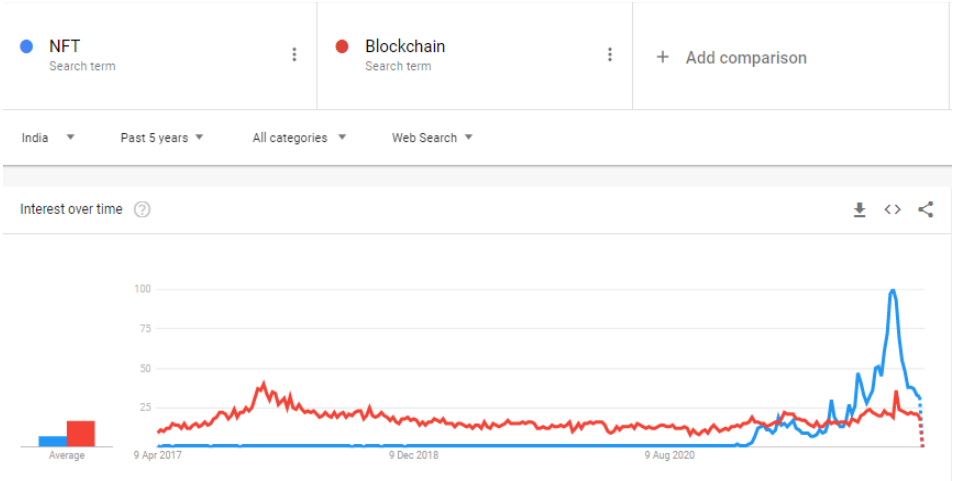
ABSTRACT

This study examines the use-cases of NFT (Non-Fungible Tokens) in different fields that are very common and handle a large number of operations daily, our research is motivated by the recent surge in the NFT activity on the internet where creators are creating the NFT and Investors are investing huge amount of money in NFT's. In Our research, we have found several other practical and scalable use-cases of NFT. We begin by introducing the NFT with the context of its history then briefly listing down the existing problem of different fields that can be solved by the NFTs easily. Existing problems in the field of Licensing & Accreditation, Artworks, Legal Documents, Gaming, Medical, Supply chain, Academic Certification, and Authenticity Verification can easily be solved by the use of NFT. In the Final Analysis of the paper, we found the Countries and Organizations that are working with NFT to improve these spaces on a large scale.

Keywords: NFT, Blockchain, Decentralization, Public Ledger, NFT Use-Cases.

I. INTRODUCTION

NFT non Fungible Token is turning your digital assets into one of a kind by creating a unique digital signature that defines the ownership of your assets. NFT are a new type of unique and indivisible blockchain-based token introduced in late 2017, While fungible tokens enabled new use cases such as ICO (Initial Coin Offering), The potential of NFT is tremendous and easily adaptable in different areas of work that are suffering from the problem of authenticity. Blockchain Technology is a radical innovation with the potential to challenge or even replace existing business models that are centralized in nature, by the term centralized means the business model or the organization which is somehow dependent on one single entity which leads to the misuse of the power very frequently, Blockchain technology reintroduces the meaning of decentralized to the world again after the internet, when internet introduces to the world in the early days it was meant to be decentralized and the public in nature but with the time goes the internet is becoming much more centralized in a nature where some organization is taking full control of the data over the internet which seems really dangerous in a way. The Concept of Blockchain was introduced in 2008 through the release of the Bitcoin Whitepaper (Nakamoto 2008) and primarily used as the technology behind the Cryptocurrencies during its first years, In 2014 the second generation of blockchain starts with the introduction of blockchain that was actually solving the problems of industries blockchain like Ethereum comes into the game that we're working on the smart contracts this was the era where blockchain started solving the crucial problems of several industries (e.g. supply chain management, international payments, international trade finance energy markets and notary services). In late 2017 NFT came into the picture from that time the significant interest surge is clearly observable. For the past 2 years, the recent surge in the blockchain is a result of continued development and research over the past 10 years.



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The idea is not so complex, Blockchain is a distributed ledger that maintain and record the transaction with the help validators (Miners) in a block that exist on the network that is very huge if we talk about the public blockchain like Bitcoin, Ethereum, Litecoin have around 400k validators across the globe that maintain and process the data, which secure the network in such a way that tempering the data is practically impossible, It simply means anything on public blockchain is not supposed to change at all at any point of time. NFT are the Digital assets that stores in the form of block on the blockchain network that means no one can change that Digital asset's data after uploading on these public blockchain, Popular public Blockchain for the NFT's are Ethereum (ERC20), Solana, Polygon, Cardano and Binance Smart Chain (BSC). Ethereum is the most established network for the NFT.

II. USE-CASES OF NFT

These are some following Areas where we can deploy the ecosystem of NFT to automate the process and also maintain the integrity of the data using Blockchain technology.

NFT As Degree or Certification

In the introduction part we have discussed that how NFT's can be used where we are concerned about the authenticity of the data, if we talk about the frauds in the Degree and certification is increasing day by day just because of the absence of the process to authenticate a degree, that are creating a real problem to employers. Giving the Degree and Certificates in form of NFT will not only solve the problem of Authenticity but also solve the problem of reissuing process done by the university and schools which are time consuming too. In 21st century where everyone wants to carry everything on their phone only so why not the academic rewards that they can display it from anywhere anytime according to their convenience. The idea is really Simple if we upload the data of degree on public blockchain and provide the degrees in the form of NFT to the Students, this process will also increase the transparency of the university to worlds and government and also ensure the integrity of the degree which has been provided by the university to the students. We can see with the recent example South Korean University will going to issue the NFT degree to their 2830 Students this is the great example even some nations are taking the advantage of the NFT technology to beat the problem of fake Degree and Certification.

NFT As License

NFT can be used to beat the problem of fake licensing in the society and organization. Licensing is the only way to authenticate any person is capable of doing work that he/she is doing, if we talk about the fraud cases of Fake Driving License is also increasing even after introducing the chip variant of the Driving License. According to Economics times approximately 30% of Driving License is fake in India. This data is Even worse if we go to the other departments which are having licensing system, Government organizations and bodies are spending billions of dollars to solve the problem but still the problem still exists on a large number, instead of this NFT can be the very efficient solution of this problem, Organization can issue NFT which represents the license of the person to which they issuing for this can ensures the integrity of the data of any license issued by the organization.

NFT As Artwork

Current if we observe the space, Art industries are heavily using the NFT. where Creators are earning millions of Dollars by creating the art and selling them online on different NFT marketplaces. Traders are also earning a decent amount of money by trading these NFT on secondary Marketplaces. Recently a NFT sold of 69.3 million $ which seems to be a lot of money for a just single piece of digital art but for some people they actually meant a lot. Previously the artist was really struggling through the problem of copying of their artwork, there were only few options available back then to protect their artwork from being stolen but if we look up the situations now, scenes are pretty different right now. Artist is not only able to prove their ownership of their artwork but also earning a decent amount of money to support their life. It also creates the big business for the marketplaces like OpenSea, Binance, Wazirx and so on. to create a platform where people can trade their NFT using different Cryptocurrencies. Masses are really confused between NFT and artworks, they always think NFT's are the Artwork due to heavy uses of this technologies in this particular domain.

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NFT As Legal Documents (FIR, Orders, Court Judgement)

Legal Document like FIR, Orders, Court Judgements and so on are supposed to be original as stated by the entities even small changes are intolerable and can create a big mess in the society, The beauty of NFT technology is after minting it on Blockchain even the Issuing Organization cannot make changes in that. It has been observed several times that issuing organization and corrupt entities sometimes do the changes in the official documents for their profit yet there is a pre-existed solution established by the different governments to ensure the integrity of the documents but that are not efficient, need lots of man power and also not transparent. Minting the Legal Documents on public blockchain will not also increase the transparency between the citizens and government but also ensures the security of the data on the next level.

NFT In Metaverse

Metaverse is the future of internet and social media where big tech giants like Facebook, NVIDEA, Microsoft are jumping in to this space to create a very big market for the future. NFT's plays an important role in this whole new concept. Idea is not so common now people are actually buying real estates in the metaverse and paying really a big amount of money and making a really good profit by just trading them. In Metaverse everything will be inform of NFT from shoes to real-estate everything will defined by the NFT only. Recently NIKE bought a NFT making company to make their NFT shoes that they can actually sell it on metaverse, so if we talk about the metaverse everything will be in form of NFT's. That will create a huge demand of NFT's in market again.

NFT In Authenticity Verification

It is too hard to authenticate the products and services now a days, yes there are some existing solutions through which we can actually authenticate any products that it is original or not but they are not automated and easy to manipulate. What if we start minting an identity of each product on blockchain as an NFT which will be publicly available that can prove the existence of any product associated with that. Question might be arising that it will going to be an expensive thing for the organization to do that. But the answer is no it totally depends on which network you are using you just need to give the small amount of gas fee to mint a NFT on any blockchain that gas fees vary from network to network with time. Ethereum (ERC20) have comparatively high fee as compared to the other network, Solana, Polygon and so on. these Network not charge as a gas fees. establishing the Authenticity verification ecosystem based on NFT will not only solve the problem but also automate the process of Authenticity Verification.

NFT in IP and Patents Records Keeping

As we discussed till now in paper that NFT is a token that serves as a digital certificate to verify the authenticity of the data stored in it. As mentioned earlier, this prevents any form of duplication of the information, thereby preserving its novelty. Patents records are very sensitive in nature they are not supposed to get manipulated at any cost. Deploying an ecosystem where each and every patient records are kept as NFT on any big public blockchain is a very secure idea this will not only automate the process as well as ensures the high-level data integrity, where each patient information will be minted as block on a blockchain which will be publicly available to read for everyone this will also increase the transparency and leads to the more secure ecosystem of record keeping.

III. CONCLUSION

As we have discussed the several practical and scalable use-cases of NFT where NFT ecosystem can make a big and positive change. 90% people thinks NFT as piece of art only where they understand that every NFT's are nothing but a piece of digital art for which people are paying crazy amount of money. This is just because of recent surge in the market of artworks where people are selling their artwork online as a NFT which subconsciously create an image of NFT which is only an artwork in a normal layman. The study reveals some very good areas with example that how can we improve the existing process or ecosystem with the deployment of NFT in that. Technology always brings the change in the society we just need to generate the spark in the society that spark generates with the awareness and correct knowledge. Blockchain is very promising technology that is able to create a new era of an Internet like WEB3 and Metaverse, and Definitely NFTs will going to play an important role in building that.

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IV. REFERENCES

[1] Non-Fungible Tokens (NFT). The Analysis of Risk and Return Mieszko Mazur, IESEG School of Management (PDF) Non-Fungible Tokens (NFT). The Analysis of Risk and Return (researchgate.net)

[2] Mapping the NFT revolution: market trends, trade networks, and visual features Matthieu Nadini, Laura Alessandretti, Flavio Di Giacinto, Mauro Martino, Luca Maria Aiello & Andrea Baronchelli

[3] Non-Fungible Tokens (NFT's): The Future of Digital Collectibles. Author: Yashika Nagpal Non-Fungible Tokens (NFT's): The Future of Digital Collectibles - International Journal of Law Management & Humanities (ijlmh.com)

[4] DEEP DIVE INTO NON-FUNGIBLE TOKENS (NFTS) AND ITS CORRELATION WITH THE PRICE OF BITCOIN AND ETHEREUM, SHREYANSH GOUSHAL GLOBAL JOURNAL FOR RESEARCH ANALYSIS: Volume-10 | Issue-8 | August-2021