NON FUNGIBLE TOKENS

Seminar
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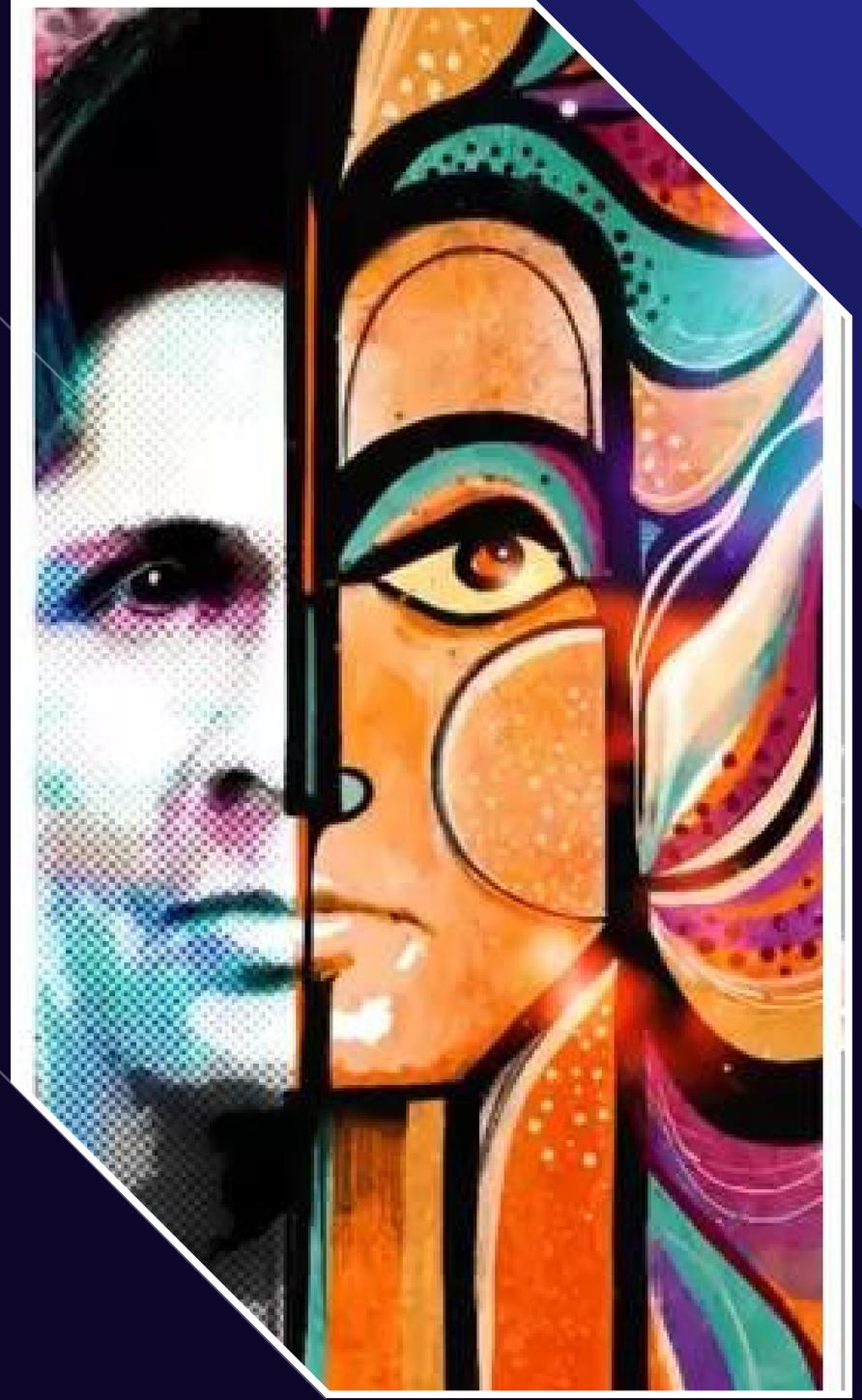
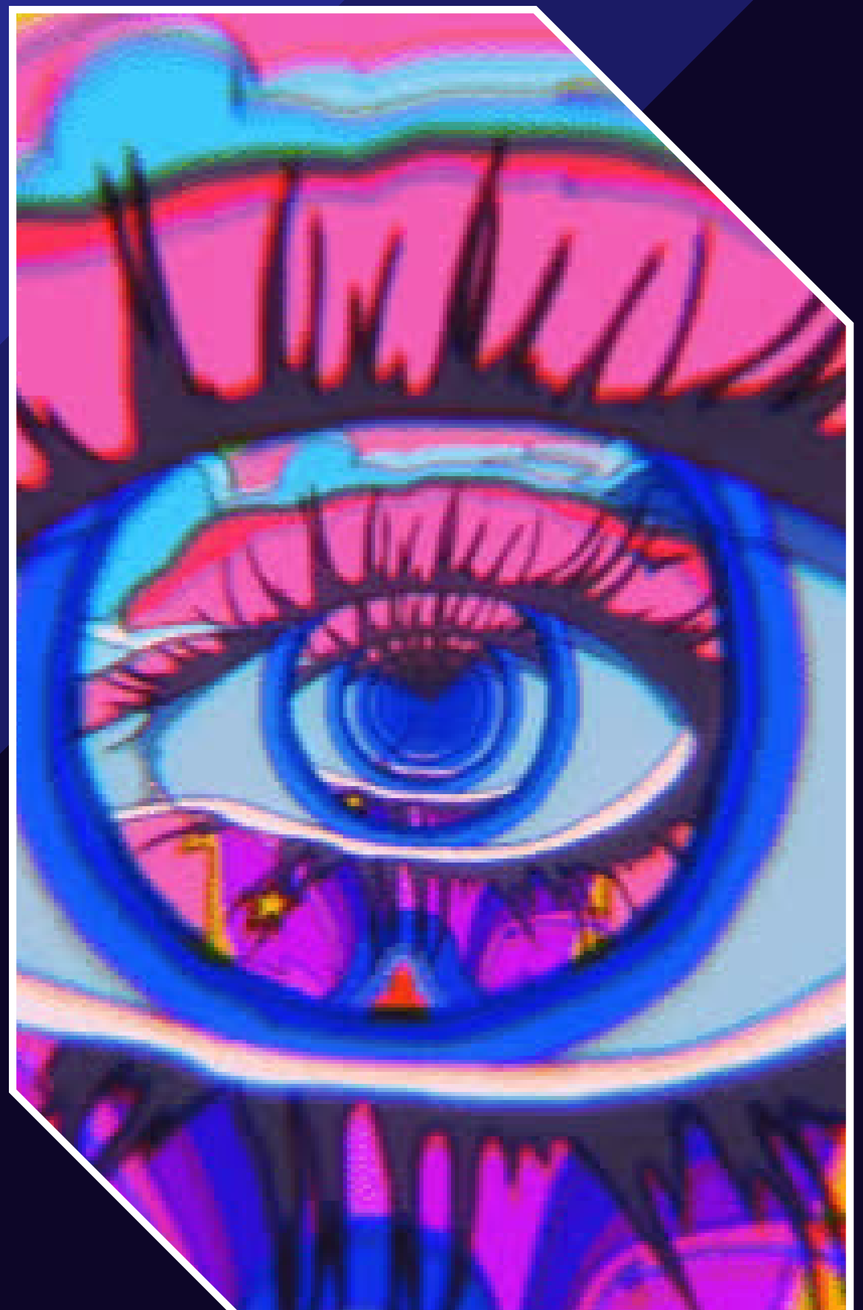
Under guidance of -

Dr. Sadhvi & Dr. Pramod



AGENDA...

1. What are NFTs?
2. Background
3. Characteristics
4. How to Create NFT?
5. Marketplaces
6. Popularity
7. Security and Safety of NFTs
8. Security Flaws
9. Applications
10. Conclusion
11. References

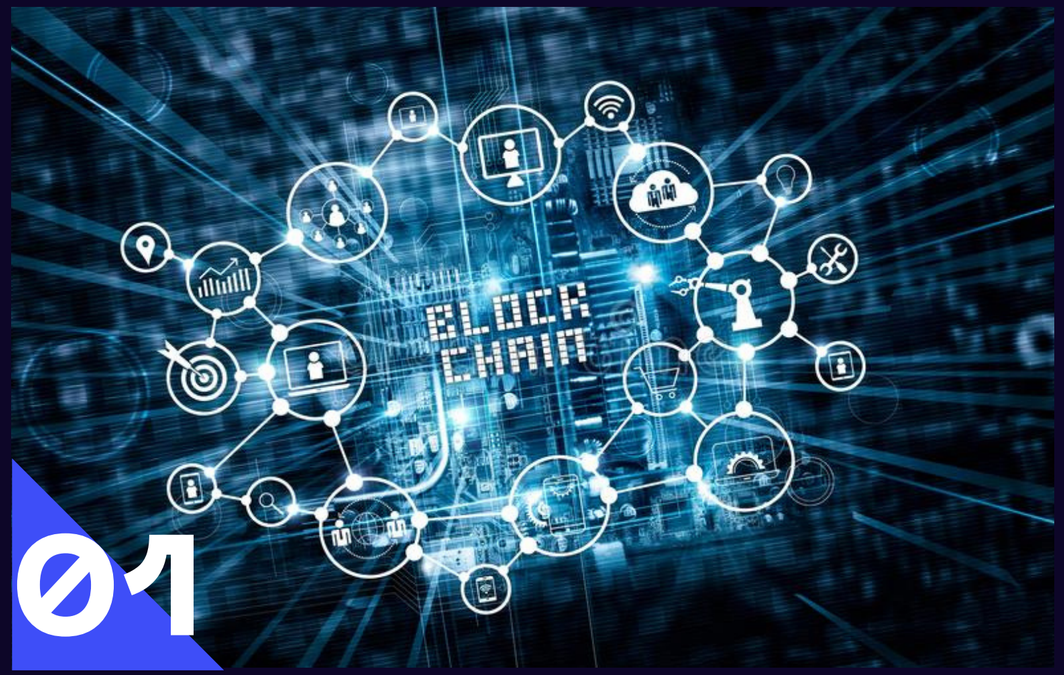


What are NFTs?

Non-Fungible Tokens

- NFTs are Non Fungible tokens that represents any digital asset (i.e art , image, video, intellectual property, etc) where each are different from each other and represent unique character.
- Due to its nature the NFT's are valuable in the digital community.
- NFTs are designed on the decentralized blockchain platform and their exchange takes place through cryptocurrencies.

Background



01

Blockchain

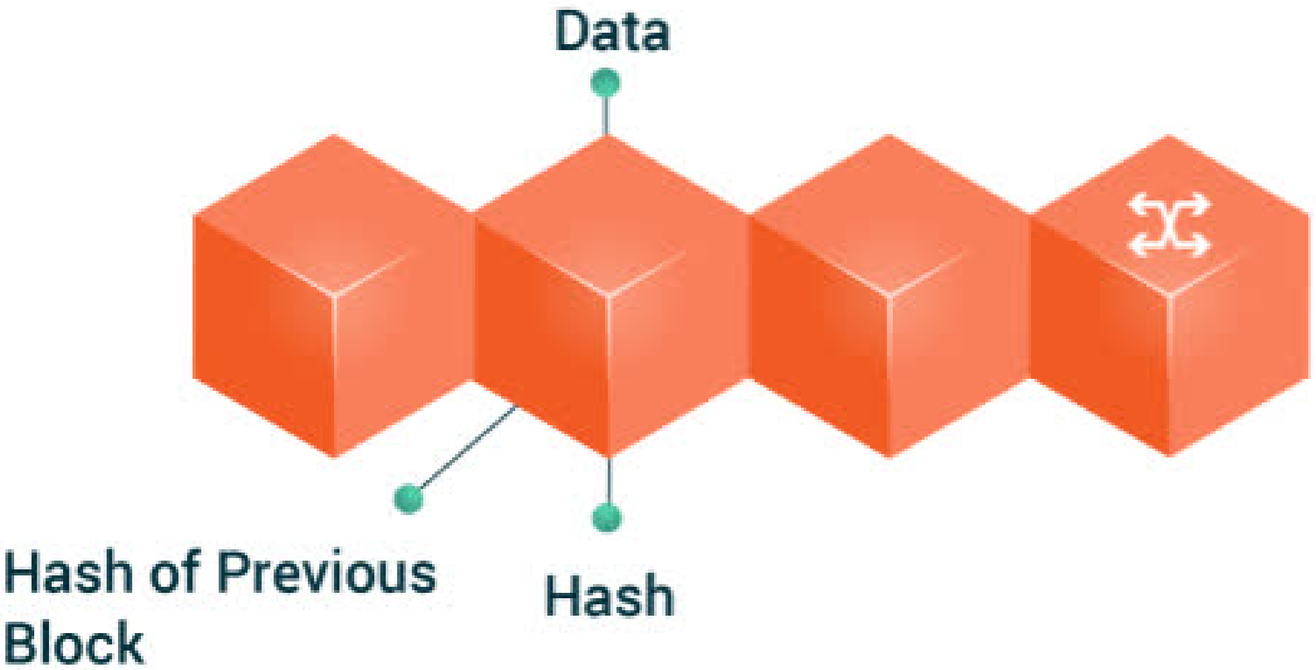
02

Ethereum

Blockchain

01

Blockchain is the peer to peer, decentalized distributed ledger connected with huge number of nodes.



02

Maintains the transactions on network and they are stored in a block.

03

Transactions are immutable and distributed across the network.

Ethereum

Most of the NFTs reside on Ethereum blockchain.

01

Some of the Ethereum standards for NFTs are ERC 721 and ERC 1155. Hybrid ERC-20 can also be used.

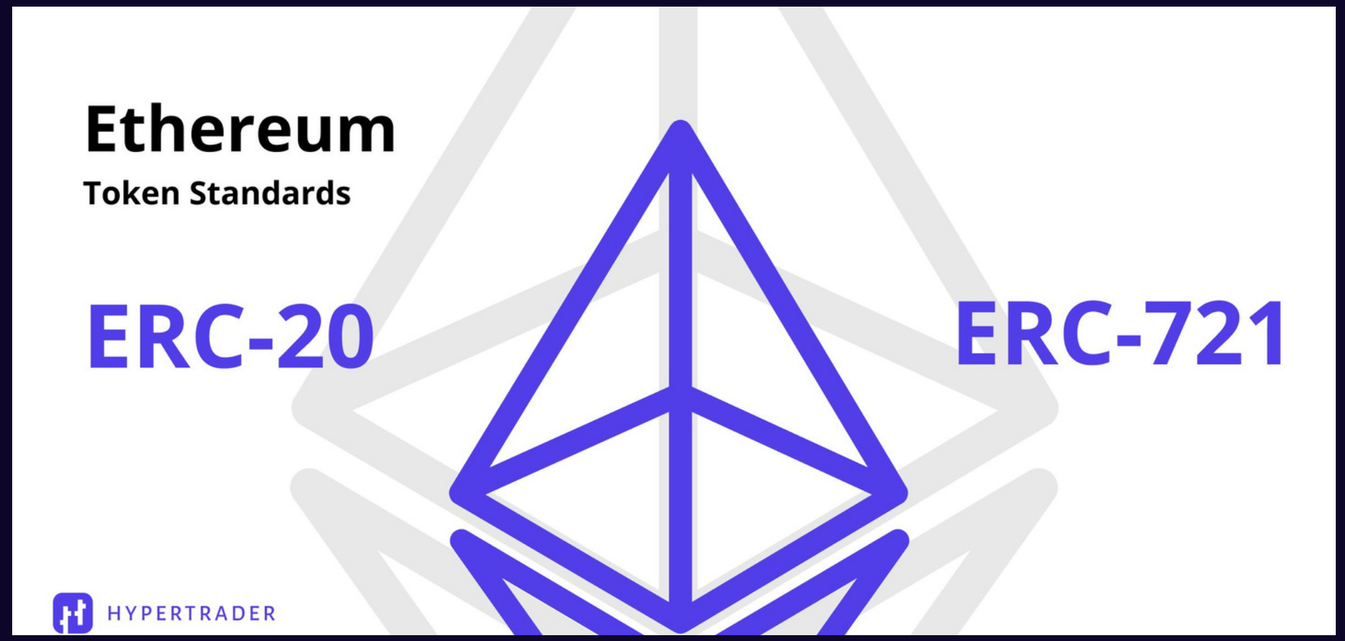
02

Other NFT standards rather than Ethereum is EOS, Flow, and Texos, etc.

03

NFTs are created using smart contracts using MINT.

04



Characteristics

01 UNIQUENESS

02 IMMUTABLE

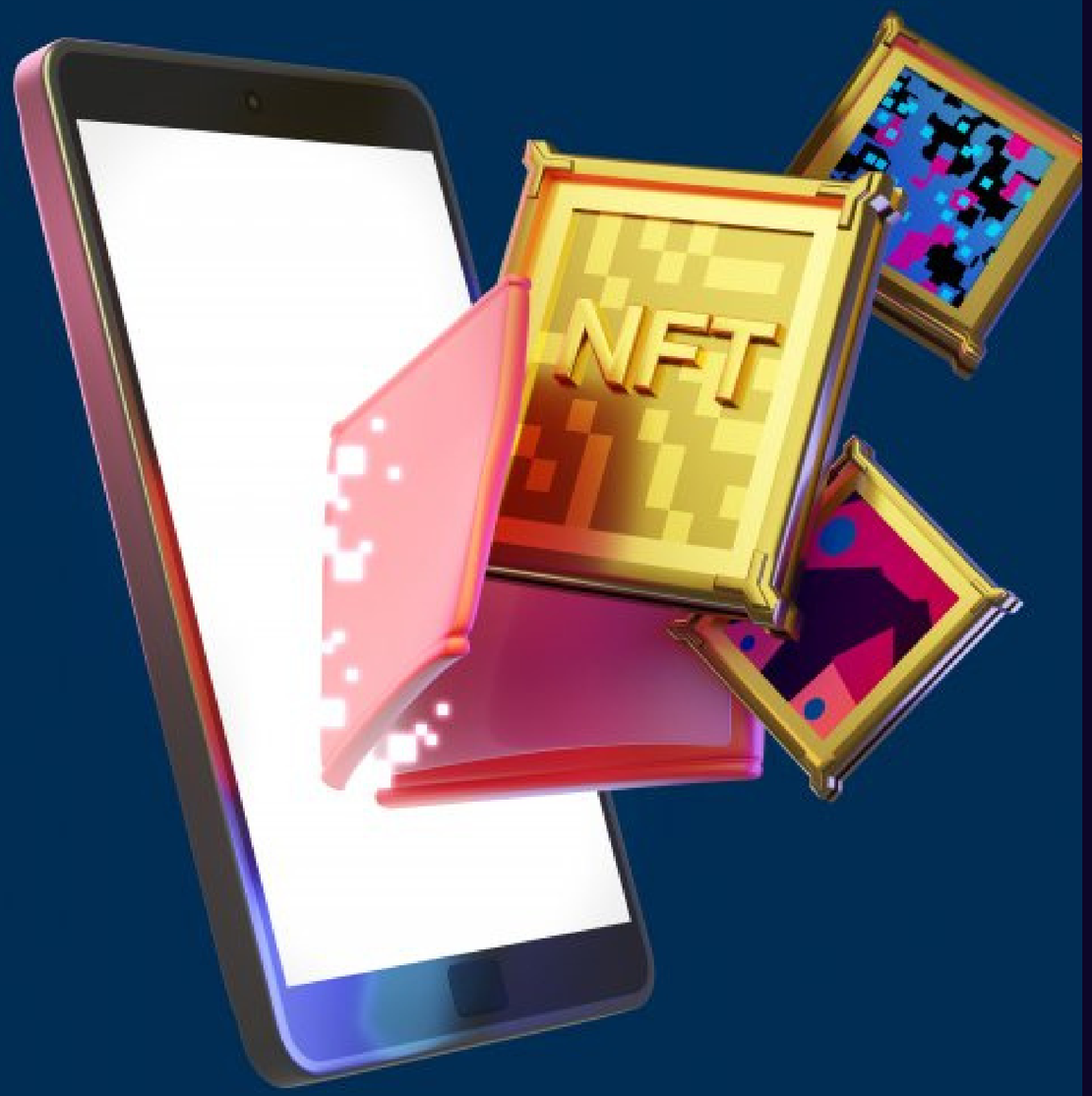
03 TRANSPERANCY

04 INDIVISIBILITY

05 OWNERSHIP

06 INTEROPERABILITY

07 RARITY



Create or Mint NFT

Choose a Blockchain

Ethereum is now the most prominent blockchain, other blockchains that enable NFTs include Polkadot, Tron, Cosmos, and others.

Ecosystem of NFT

Choose a platform that can handle NFT transfers and sales across several blockchains.

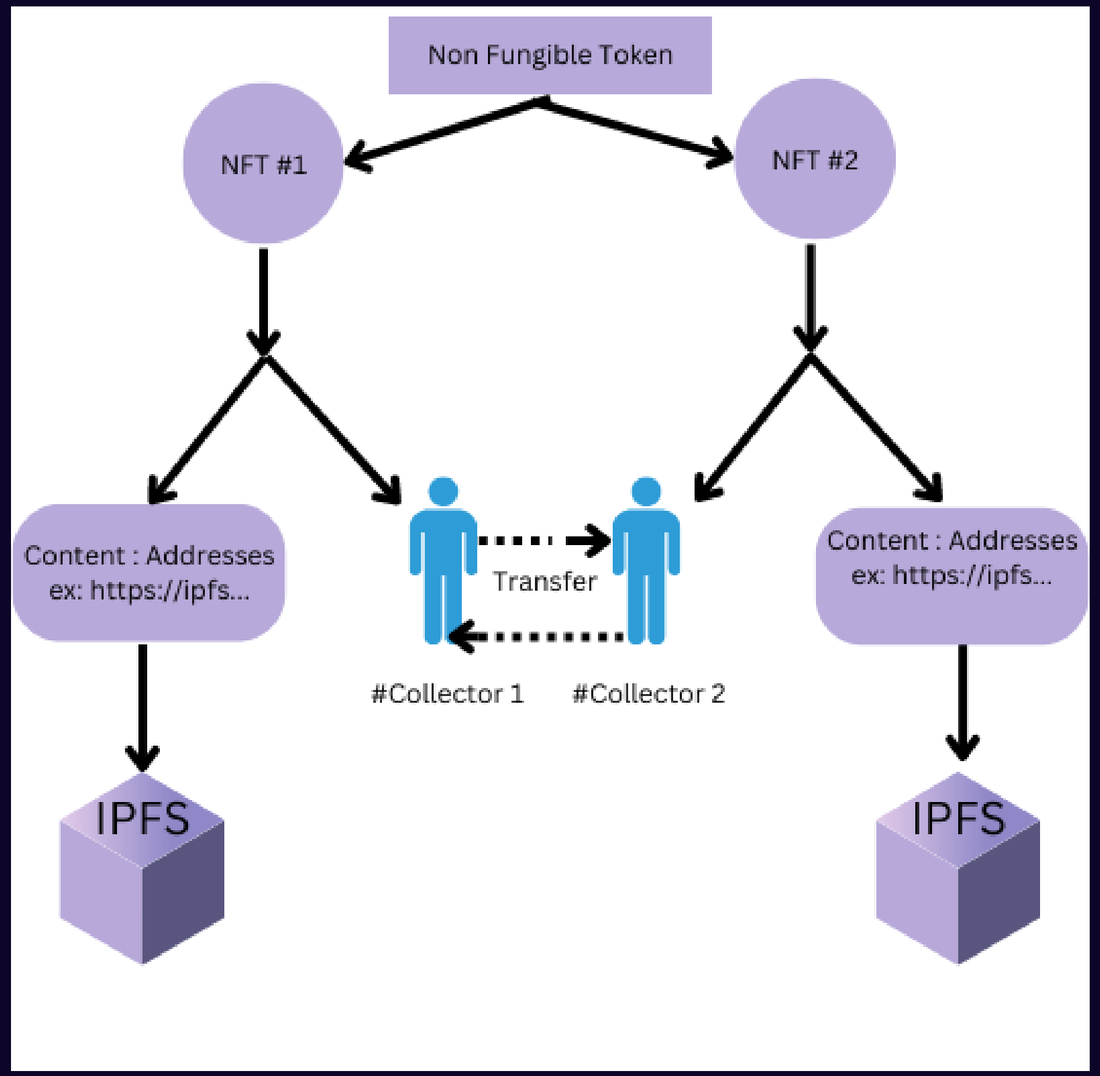
Connect to the Wallets

To use these platforms, creators must first connect their crypto wallets to them.

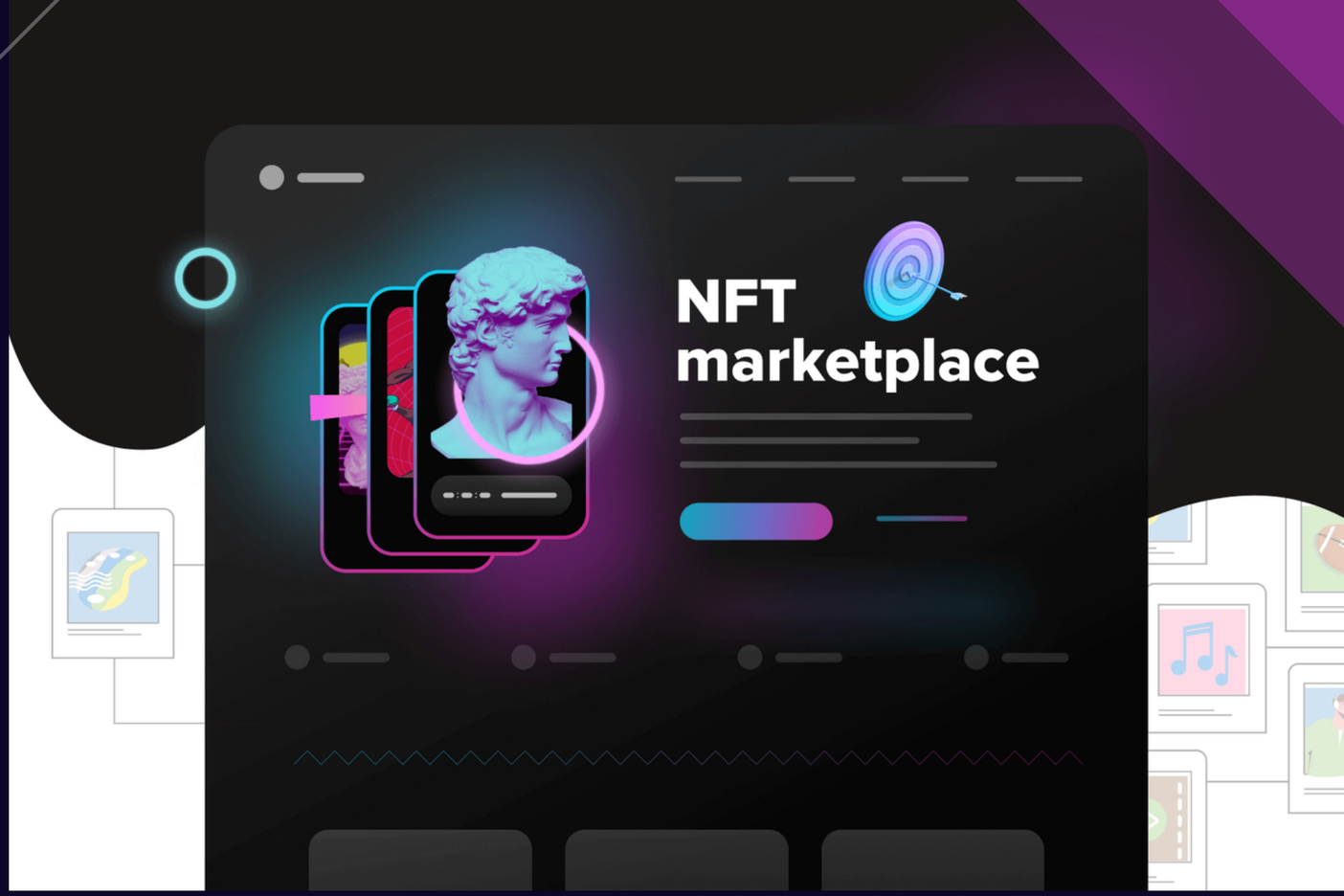
Minted NFT

Non-fungible coins are posted on a site after artists upload and sign their works of art using a crypto wallet.

WORKFLOW OF NFTs



NFT Marketplace



- NFT marketplace is a platform that facilitates the trading of callabilities in secured Blockchain Network.
- The platform is used to secure the arts and digital callabilities with the blockchain.
- Users Mint the Non fungible tokens here. Various creators can create their assets and grab this platform for selling and buying the digital assets.

Famous Projects or Marketplaces

Opensea

OpenSea is the world's first and largest web3 marketplace for NFTs and crypto collectibles. platform is famously known as a vast collection of rare digital items and collectibles

Cryptopunk

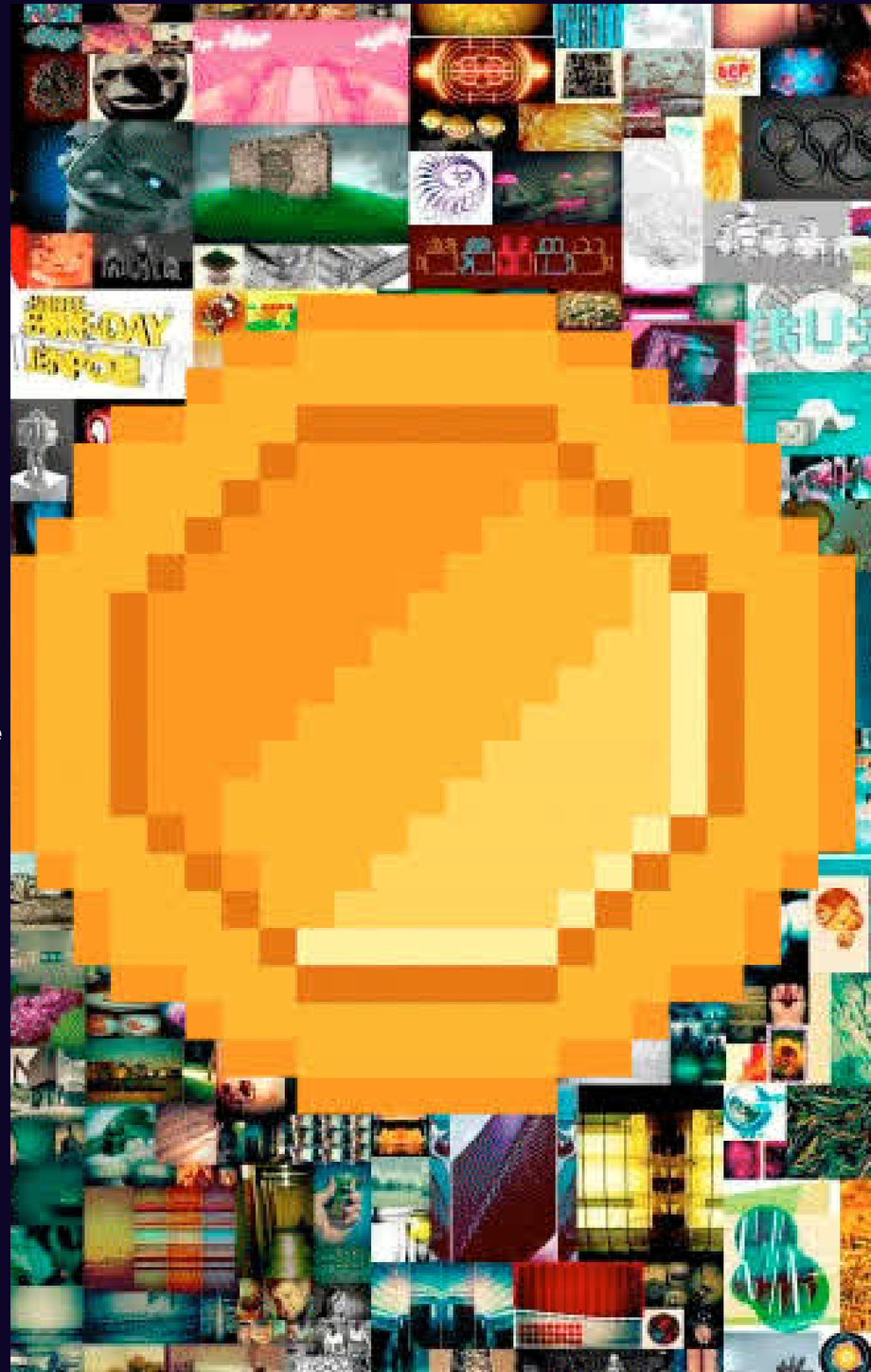
CryptoPunk is a collection of 10,000-pixel images, each image displaying different personalities, combinations, and special unique characters created randomly.

Decentraland

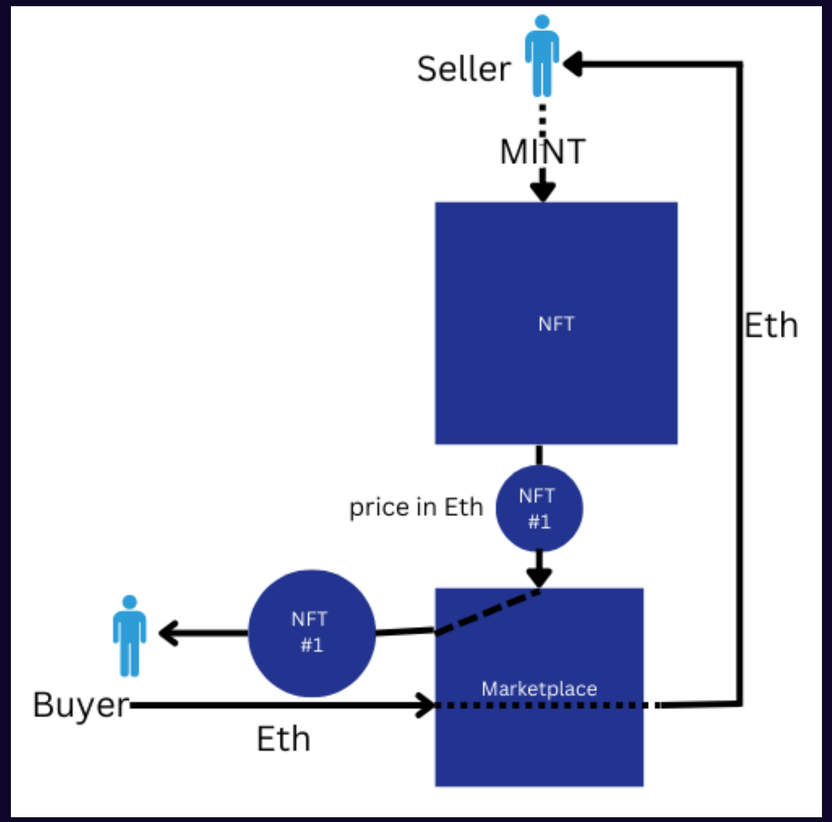
Decentraland is a software running on Ethereum that seeks to incentivize a global network of users to operate a shared virtual world. Decentraland users can buy and sell digital real estate, while exploring, interacting and playing games within this virtual world.

Sorare

Sorare is a football fantasy game where players buy, sell, trade, and manage a virtual team with digital player cards.



NFT Marketplace Workflow



Why NFTs are popular

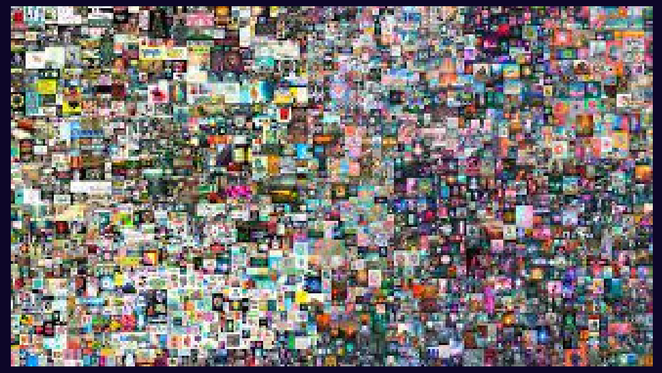
- Normalization and excitement of cryptocurrencies and the underlying blockchain frameworks.
- Non-fungible token gained ownership of the content by someone but still can make way over internet.
- Creating and circulating fake collectibles doesn't work.
- NFTs are rare and unique, unlike other cryptographic assets.
- Launch of CryptoKitties in 2017.

Market	Avg. Price	Traders	Volume
OpenSea	$341.95	24,41,356	$33.04B
Axie marketplace	$170.28	21,74,723	$4.26B
CryptoPunks	$131.72k	7,263	$2.98B
Magic Eden	$123.02	13,72,009	$1.91B
Look Rare	$6.33k	1,11,766	$1.64B

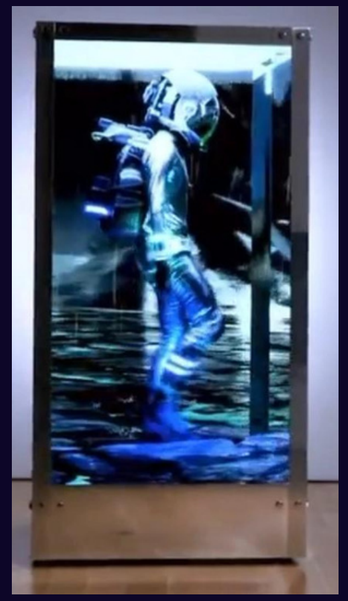
Some Popular NFTs

The Merge

Everyday: The first 5000 days



Human One



CryptoPunk #5822

CryptoPunk #7523

How safe are NFTs?

IMMUTABLE

All of the NFTs are stored on the blockchain platform where the ledger is immutable.

Private Key

NFT has private key that stored in digital wallet. The private key is required to access the NFT.

Zero Knowledge Proof

ZKP is a cryptographic mechanism that allows you to prove to another party specific attributes without revealing them

Security Flaws

- IPFS Data Loss
- Smart contract manipulation
- Steal NFTs: private key and seed phrase
- Environmental impact

Applications

GAMING
AND SPORTS

DIGITAL
CONTENT

LICENSES &
CERTIFICATES

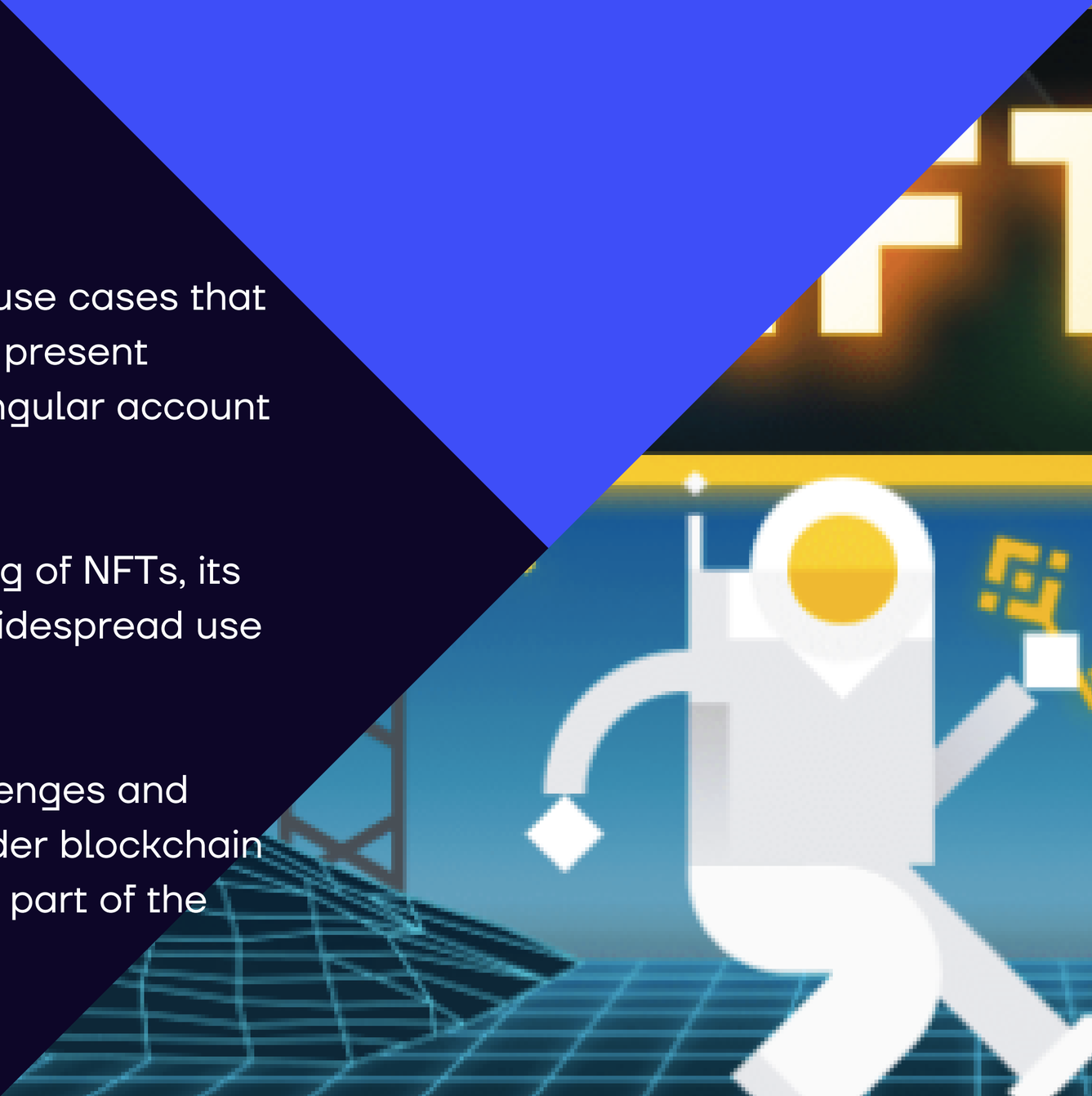
HEALTH CARE

Conclusion

- The novel characteristic of unique tokens enabled use cases that had the exclusive ownership of digital assets. NFTs present improved methods of enforcing authenticity to a singular account on the blockchain.

- Numerous platforms facilitate the buying and selling of NFTs, its use extended to many other domains. Increasing widespread use of NFTs. However, comes with many challenges.

- There exist viable solutions for many of these challenges and solutions are yet to gain momentum among the wider blockchain community. NFT could represent a more significant part of the digital economy in the future.



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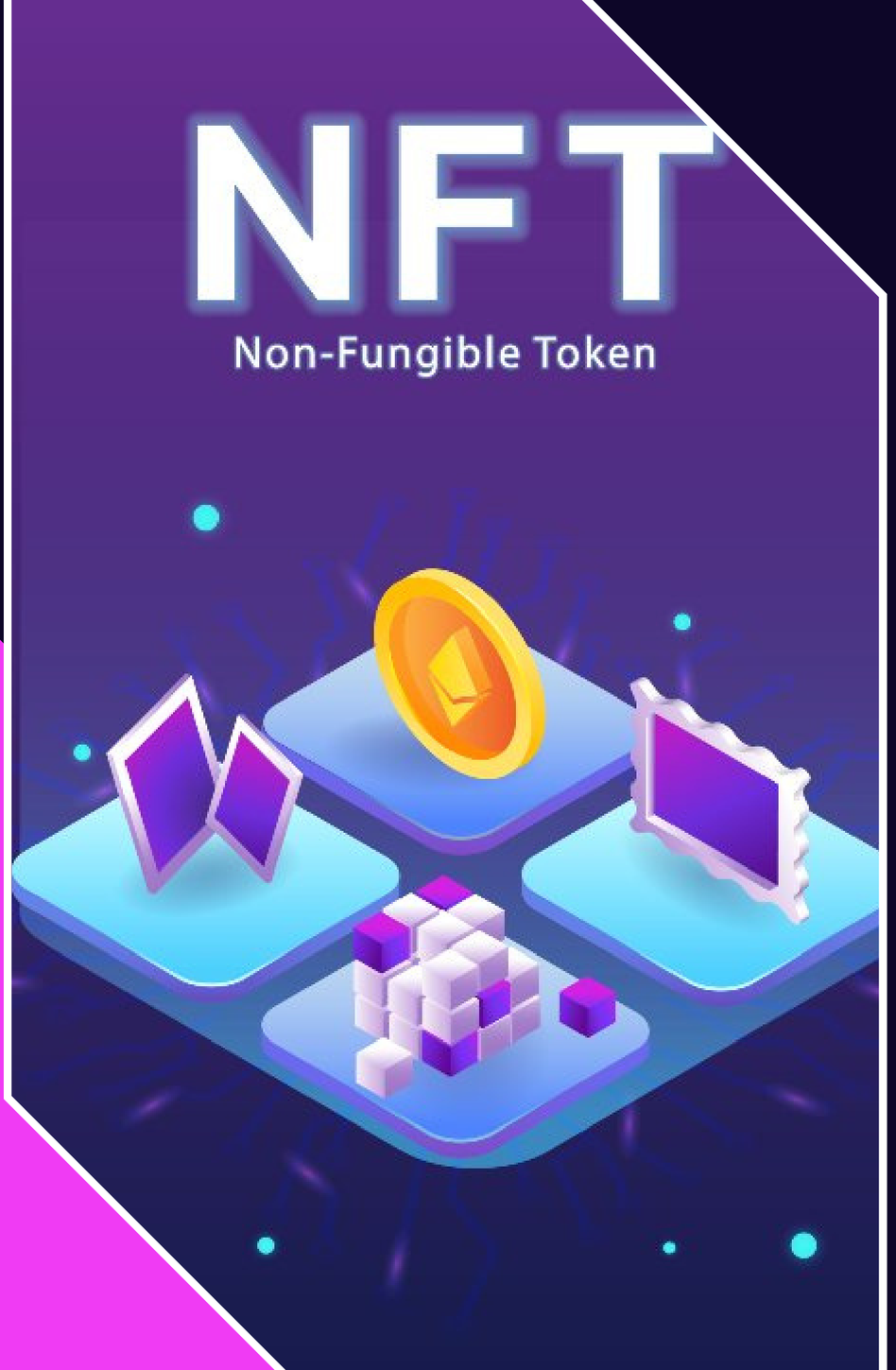

Thank You

ANY QUESTIONS?

Presented by

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