MUCT NODE X catis

White paper

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WHAT IS BLOCKCHAIN?

Blockchain is a distributed ledger technology that consists of a series of blocks linked together in a chain.

Each block contains a series of transactions and a pointer to the previous block, thus creating a block chain. Data within a blockchain is immutable, i.e. it cannot be changed once it is placed in the chain. This is made possible thanks to the use of a consensus mechanism, i.e. a process by which network nodes agree on the current state of the blockchain.

One of the main characteristics of the blockchain is decentralization: there is no central authority that controls the network, but all the nodes participate in its management. This ensures a high degree of safety as there is no single point of failure.

The best known cryptocurrency based on the blockchain is Bitcoin, but there are many other cryptocurrencies and projects based on this technology, including Ethereum, Ripple and Litecoin. In addition to its use in cryptocurrency, the blockchain can be used in various fields such as:

-digital asset management
-the creation of smart contracts
-supply chain management
-copyright management
-the traceability of goods and services

In the future, blockchain technology is expected to have a significant impact on many aspects of daily life, from finance to logistics, healthcare to intellectual property.

KEY FEATURES

The consensus mechanism is a fundamental element of the blockchain, as it guarantees the security and reliability of the network. There are different consensus techniques used in different blockchains, including Proof of Work (PoW) and Proof of Stake (PoS).

Proof of Work (PoW) is a consensus mechanism used by Bitcoin and many other blockchains. In a PoW system, network nodes, known as miners, have to solve a complex computational problem in order to add a new block to the blockchain. The difficulty of the problem is adjusted so that it takes a certain amount of time to solve. The miner who solves the problem first is rewarded with a certain amount of cryptocurrency.

The computational problem was designed to be difficult to solve but easy to verify. This means that all nodes on the network can verify that the miner who fixed the problem actually complied with the rules. This ensures that only miners who comply with the rules can add new blocks to the blockchain.

PoW was one of the first consensus mechanisms used in the blockchain, it is well-tested and provides strong security. However, it also has some disadvantages, such as high power consumption as miners have to solve complex problems using large amounts of computing power, and the concentration of power in the largest and best equipped miners. Additionally, PoW can be susceptible to 51% attacks where a pool of miners controlling the majority of the network's computing power could manipulate the blockchain.

Proof of Stake (PoS) is an alternative consensus mechanism to PoW. In a PoS system, network nodes, known as validators, need to invest an amount of cryptocurrency in order to participate in the creation of new blocks.

The likelihood of a validator being selected to create a new block depends on the amount of cryptocurrency they have invested, this is called "staking". In this way, validators have an economic interest in keeping the blockchain secure since they have an investment in it. Also, PoS requires less computing power than PoW, so it has a lower environmental impact.

However, PoS also has some disadvantages such as the exclusion of participants with less resources, as only validators with a significant amount of cryptocurrency can participate and have a significant probability of creating a block.

BLOCKCHAIN AND ESG CRITERIA

ESG criteria (Environment, Social and Governance) are a set of criteria used to evaluate the sustainability of a company or an investment.

They include environmental, social and governance factors and aim to assess the impact of corporate activities on the environment, society and equity. Blockchain technology has the potential to contribute positively to ESG criteria in several ways:

1. Transparency: The blockchain provides an immutable and transparent record of transactions, allowing companies to track and document their sustainable practices and their actions to comply with ESG criteria. This allows investors and stakeholders to verify companies' compliance with these criteria.

2. Supply Chain: The blockchain can be used to track and verify the provenance of raw materials, ensuring that they have been sourced sustainably and that companies comply with environmental criteria.

3. Certification: The blockchain can be used to register and verify the certification of companies, such as environmental or social ones.

4. Sustainable payments: The blockchain can be used to create sustainable payment systems, for example through green cryptocurrencies, which allow for the reduction of CO2 emissions related to financial transactions.

5. Sustainable investing: Blockchain can be used to create sustainable investment platforms, which allow investors to invest only in companies that comply with ESG criteria.

In summary, the blockchain can contribute to ESG criteria by providing transparency and immutability in data, allowing to trace and verify the origin of raw materials, certifying the sustainable actions of companies and creating sustainable payment and investment systems.

WHAT ARE NFTs ?

NFTs (non-fungible tokens) are a type of blockchain-based cryptographic token that represent unique and non-exchangeable assets. The most commonly used development language to create NFTs is Solidity, which was designed for the Ethereum platform. Solidity is an object-oriented programming language similar to JavaScript and C++ that allows developers to create smart contracts on the blockchain.

As for the functions that can be integrated into NFTs, these can include properties such as intellectual property, physical property, digital rights, copyrights and much more. Additionally, NFTs can also include features such as the ability to buy, sell, trade and transfer properties, as well as the ability to use digital assets in games and other applications.

NFTs are unique and non-exchangeable digital tokens. They represent digital ownership of a work of art, video, sound, tweet or any other intangible thing. NFTs can be bought, sold and traded as rare commodities, just like traditional works of art.

They are created and stored on a blockchain, which makes them easily verifiable and ensures they cannot be duplicated or counterfeited. There are several programming languages used for NFT development, including Ethereum, EOS, TRON, and others.

STANDARD DEVELOP. PROCESS

NFTs have many uses and can be used in different industries, some of which are:

1. Digital Art: NFTs allow artists to monetize their digital works, making them unique and verifiable. Additionally, buyers can purchase and hold digital artworks as rare goods, just like traditional artworks.

2. Gaming: NFTs can be used to represent unique virtual items within games, such as weapons, armor, characters, etc. These items can be bought, sold, and traded between players, creating a secondary market for in-game items.

3. Real estate: NFTs can be used to represent digital real estate, such as virtual land within virtual worlds or a certain space within a mobile application.

4. Certification of Authenticity: NFTs can be used to verify the authenticity of physical goods, such as works of art, jewelry, etc.

5. Copyrights: NFTs can be used to protect the copyrights of digital content, such as photographs, videos, music, etc.

6. Marketing: NFTs can be used to create unique marketing campaigns, enabling brands to create interactive and engaging experiences for their customers.

In summary NFTs have a wide range of uses, and are used to represent digital ownership of anything intangible, creating a market for digital assets.

INTEGRATION OF NFTs IN CATIS WORLD

NFTs can be used in multiple ways for marketing and e-commerce integration:

1. Unique Marketing Campaigns: NFTs can be used to create unique and interactive marketing campaigns, such as creating unique NFTs for special events or product launches.

2. Exclusive content development: NFTs can be used to develop exclusive content, such as videos or images, which can only be purchased through NFTs.

3. Personalization of products: NFTs can be used to personalize products, allowing buyers to have a unique and personalized shopping experience.

4. Community Building: NFTs can be used to build communities of buyers and collectors, allowing them to trade and share their NFTs.

5. Loyalty Program Development: NFTs can be used to develop loyalty programs, rewarding loyal customers with exclusive NFTs.

6. Social Media Integration: NFTs can be used to create social media marketing campaigns, allowing users to purchase and share NFTs on their social profiles.

In summary, NFTs can be used in multiple ways for marketing and integration into an e-commerce, creating unique and personalized experiences for customers, protecting product copyrights, developing loyalty programs.

BLOCKCHAIN AND ESG CRITERIA

To integrate NFTs (non-fungible tokens) into your ecommerce of physical products, there are several options you can consider. Here are some ideas:

1. Selling NFTs as add-on products: You can offer NFTs as a add-on product to purchase alongside your physical products. For example, you can create a unique digital artwork as an NFT and sell it alongside a physical print of the artwork.

2. Create NFTs as proof of authenticity for physical products: You can use NFTs to create digital proofs of authenticity for your physical products. For example, you can create an NFT that contains information about the physical product, such as the manufacturing date and serial number.

3. Use NFTs to Create Immersive Shopping Experiences: You can use NFTs to create immersive shopping experiences for your customers. For example, you can create a virtual experience where customers can see and interact with your physical products in a realistic way.

4. Integrate an NFTs platform on an e-commerce site: There are several platforms for creating and managing NFTs, including OpenSea, Rarible, SuperRare, etc. You can integrate one of these platforms into your ecommerce platform to allow users to buy and sell NFTs.

INTEGRATION NFTs VOUCHERs IN E-COMMERCE

Integrating NFTs as vouchers to encourage purchases in your e-commerce can be an interesting idea. Here are some ways it can be done:

1. Create NFTs as vouchers for discounts on future purchases: You can create NFTs that act as vouchers for discounts on future purchases in your e-commerce. For example, you can create an NFT that entitles you to a 10% discount on your next purchase.

2. Create NFTs as "loyalty points" for future purchases: you can create NFTs that act as "loyalty points" for future purchases in your e-commerce. For example, you can create an NFT that earns one point for every dollar spent and allow users to use these points for discounts on future purchases.

3. Create NFTs as "tickets" for exclusive events: You can create NFTs that act as "tickets" for exclusive events, such as concerts or exhibitions, and offer access to events only to those who own the NFT.

4. Create NFTs as a "pass" to access exclusive content: you can create NFTs that act as a "pass" to access exclusive content in your e-commerce, such as video tutorials or webinars.

POTENTIAL USES OF NFTs

There are several ideas on how to use NFTs to offer discounts to customers in your e-commerce:

1. Create a Loyalty Level System: You can create a loyalty level system based on the purchase of NFTs. For example, you can create an NFT that entitles you to a loyalty tier, and as customers buy more NFTs, they level up and get bigger and bigger discounts.

2. Create an NFT Collection System: You can create an NFT collection system where customers can collect unique NFTs and exchange them for discounts on future purchases. For example, you can create an NFT that represents a specific product, and once a customer has collected all of the NFTs in the set, they can exchange them for a discount on purchasing the actual product.

3. Create a challenge system: You can create a challenge system where customers can earn NFTs by completing certain actions, such as reaching a certain spending level or completing a questionnaire. Once customers have earned a certain number of NFTs, they can exchange them for discounts on future purchases.

4. Create a Referral System: You can create a referral system where customers can earn NFTs for every new customer they bring to your ecommerce. For example, you can create an NFT that entitles you to a 10% discount on a next purchase for every new customer a customer brings to your ecommerce.

5. Create a game system: You can create a game where customers can win NFTs, these NFTs can be exchanged for discounts on future purchases.

6. Create a rewards system: You can create a rewards system where customers can earn NFTs for reaching certain goals, such as purchasing a certain number of products or completing a survey. Customers can then exchange the NFTs for discounts on future purchases.

7. Create an Auction System: You can create an auction system where customers can purchase NFTs to get discounts on future purchases. For example, you can create one-of-a-kind NFTs that represent 10% off your next purchase and auction them off to customers.

POTENTIAL USES OF NFTs

8. Create a membership system: You can create a membership system where customers can purchase a monthly membership which gives them access to exclusive discounts and unique NFTs.

9. Create an NFT "unlock" system: You can create a system where customers must complete certain actions to "unlock" NFTs that entitle them to discounts on future purchases. For example, you can create an NFT that entitles you to 10% off your next purchase but can only be unlocked by completing a customer satisfaction survey.

10. NFT as a Means of Participation in Events and Contests: Customers can use NFT to participate in events or contests and receive discounts on their purchases.

11. NFT as a means of accessing an exclusive community: Customers can use NFT to access an exclusive community of customers and receive discounts on their purchases.

12. NFT as a Means of Unlocking Personalized Content: Customers can use NFT to unlock personalized content, such as personalized products, and receive discounts on their purchases.

13. NFT as a points collection tool: Customers can collect NFT points to get discounts on their purchases.

14. NFT as a means of accessing team members: Customers can use NFT to access a Q&A session with team members and receive discounts on their purchases.

POTENTIAL APPLICATION OF NFTs IN SOCIAL MEDIA

1. Using NFTs for posting to social posts: Clients can use their NFTs to post to social posts, so that their posts are associated with their NFT and can be easily identified and verified as genuine.

2. Using NFTs for creating personalized content: Clients can use their NFTs to create personalized content, such as videos or photographs, and post them on social media.

3. Use of NFTs to access exclusive content: Clients can use their NFTs to access exclusive content, such as live streams or webinars, on social media.

4. Use of NFTs to access special social media features: Customers can use their NFTs to access special social media features, such as filters or exclusive stickers.

5. Using NFTs to Participate in Social Media Campaigns: Clients can use their NFTs to participate in social media campaigns and earn rewards or discounts.

6. Use of NFTs to Build an Exclusive Social Media Community: Clients can use their NFTs to access an exclusive social media community and interact with other community members.

7. Use of NFTs for Social Media Identity Verification: Customers can use their NFTs to verify their identity on social media and access features only for verified members.

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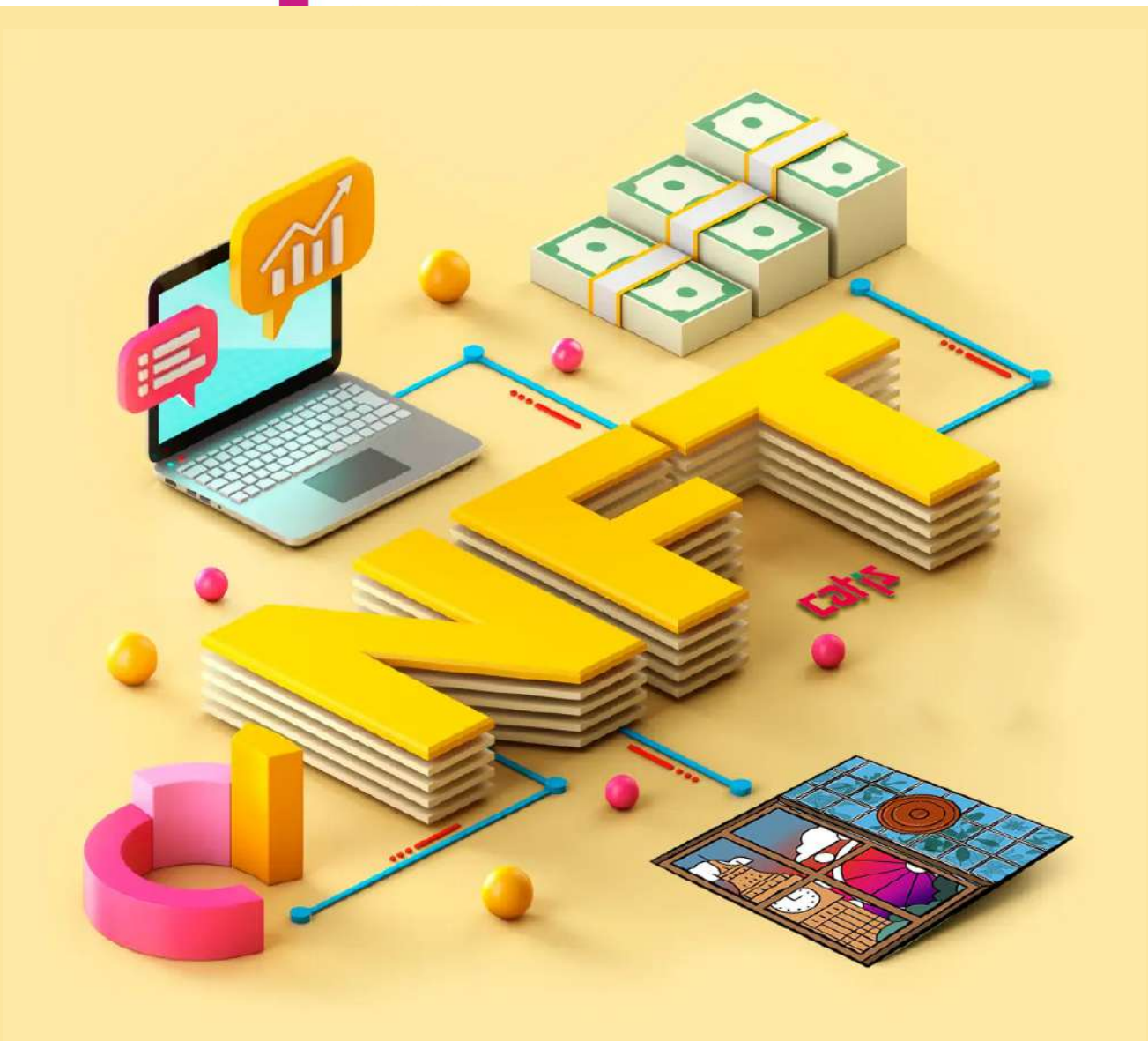


CATIS NFT COLLECTION

Key features

Smart contract: 0x09b0e9079c49bef961e82e1b0f8aeb5c4e8a6f87

Link Smart Contract

Goerli ETH:
https://goerli.etherscan.io/address/0x09b0e9079c49bef961e82e1b0f8aeb5c4e8a6f87

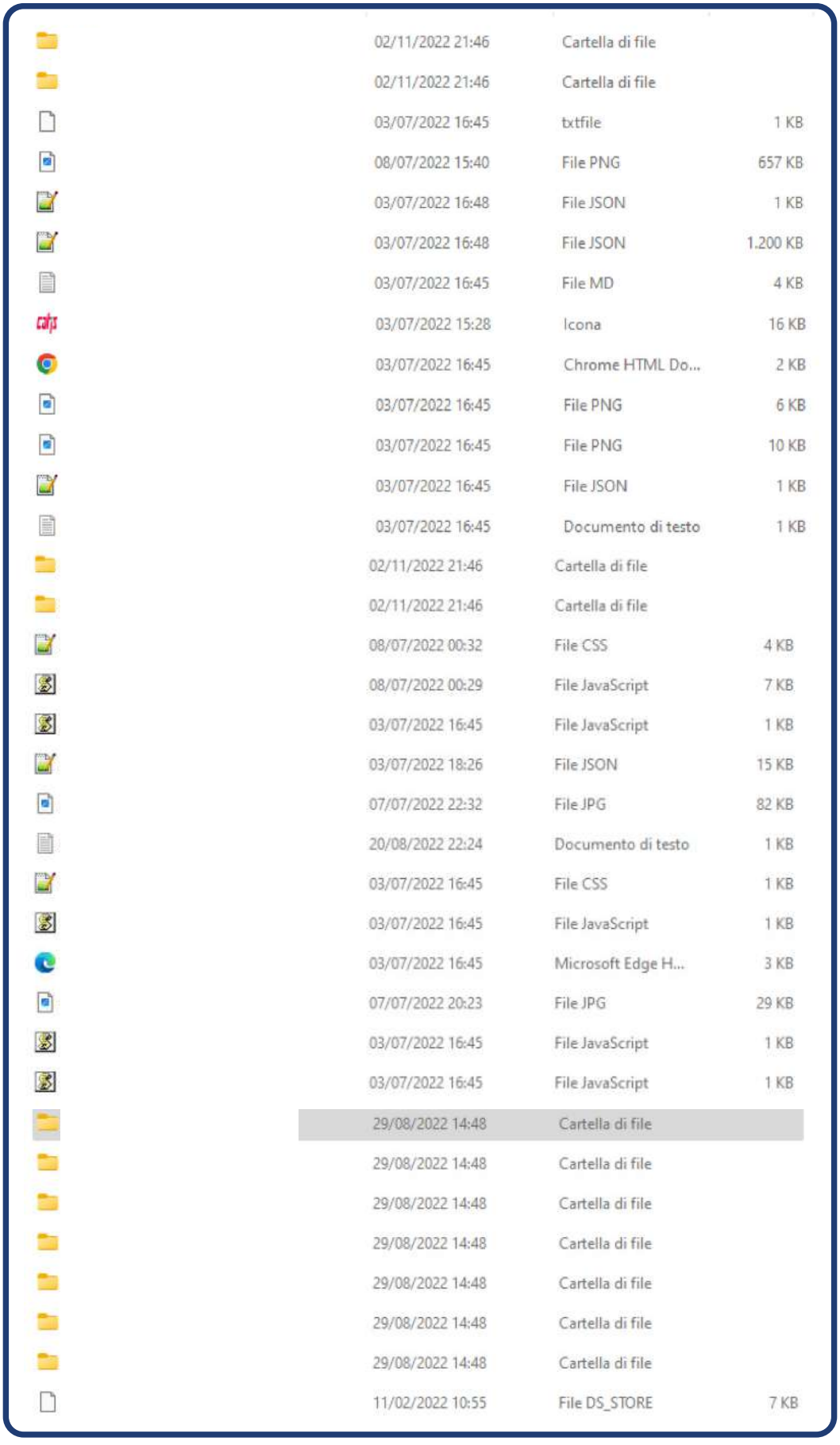
Polygon:
https://polygonscan.com/address/0x09b0e9079c49bef961e82e1b0f8aeb5c4e8a6f87

Link dapp: https://ct1-wheat.vercel.app/

Rete: Goerli ETH/Polygon

CATIS NFT COLLECTION

Main Files



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	02/11/2022 21:46	Cartella di file	
	03/07/2022 16:45	txtfile	1 KB
	08/07/2022 15:40	File PNG	657 KB
	03/07/2022 16:48	File JSON	1 KB
	03/07/2022 16:48	File JSON	1.200 KB
	03/07/2022 16:45	File MD	4 KB
	03/07/2022 15:28	Icona	16 KB
	03/07/2022 16:45	Chrome HTML Do...	2 KB
	03/07/2022 16:45	File PNG	6 KB
	03/07/2022 16:45	File PNG	10 KB
	03/07/2022 16:45	File JSON	1 KB
	03/07/2022 16:45	Documento di testo	1 KB
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	08/07/2022 00:29	File JavaScript	7 KB
	03/07/2022 16:45	File JavaScript	1 KB
	03/07/2022 18:26	File JSON	15 KB
	07/07/2022 22:32	File JPG	82 KB
	20/08/2022 22:24	Documento di testo	1 KB
	03/07/2022 16:45	File CSS	1 KB
	03/07/2022 16:45	File JavaScript	1 KB
	03/07/2022 16:45	Microsoft Edge H...	3 KB
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	11/02/2022 10:55	File DS_STORE	7 KB

CATIS NFT COLLECTION

Smart contract

Link smart contract:
https://polygonscan.com/address/0x09b0e9079c49bef961e82e1b0f8aeb5c4e8a6f87#code

Metadata example for 1 NFT

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“description”: “CATIS3.0”,
“image”:
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“edition”: 1,
“date”: 1657137747086,
“attributes”: [
{
“trait_type”: “sky”,
“value”: “Nightfall”
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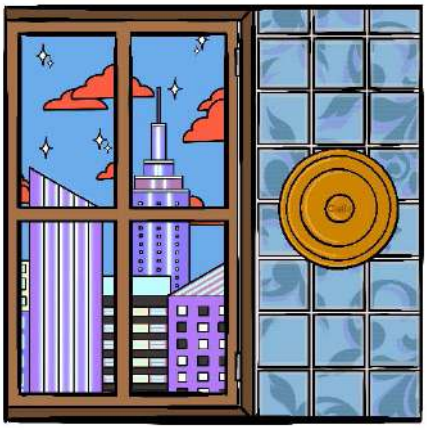
{
“trait_type”: “city”,
“value”: “NewYork”
},
{
“trait_type”: “wall”,
“value”: “flower”
},
{
“trait_type”: “brick”,
“value”: “black”
},
{
“trait_type”: “button”,
“value”: “grey”
},
{
“trait_type”: “window”,
“value”: “brown”
},
{
“trait_type”: “line”,
“value”: “Black”
}
],
“compiler”: “CATIS ART ENGINE”
},

CATIS NFT COLLECTION

NFT Example

BRICK Black 100% have this trait	BUTTON Grey 32% have this trait	CITY NewYork 27% have this trait
LINE Black 100% have this trait	SKY Nightfall 18% have this trait	WALL Flower 14% have this trait
WINDOW Brown 100% have this trait		



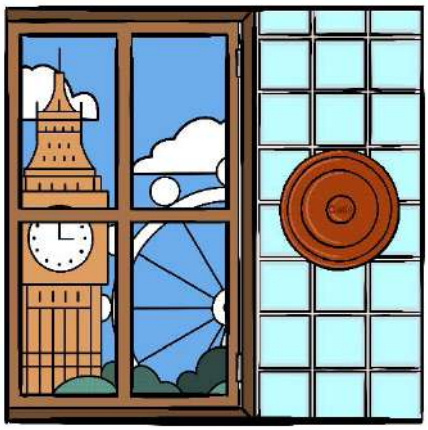
BRICK Black 100% have this trait	BUTTON Yellow 36% have this trait	CITY NewYork 27% have this trait
LINE Black 100% have this trait	SKY Blue 23% have this trait	WALL Flower 14% have this trait
WINDOW Brown 100% have this trait		

BRICK Black 100% have this trait	BUTTON Yellow 36% have this trait	CITY AlienAttack 23% have this trait
LINE Black 100% have this trait	SKY Night 32% have this trait	WALL Mixed 14% have this trait
WINDOW Brown 100% have this trait		

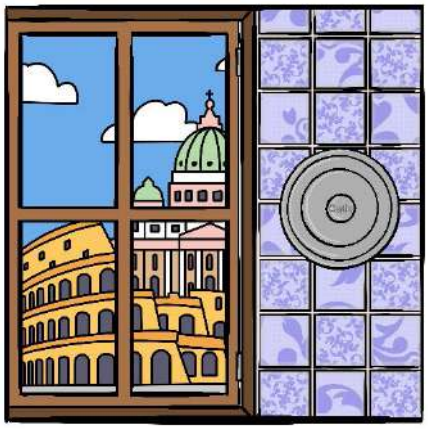
CATIS NFT COLLECTION

NFT Example

BRICK	BUTTON	CITY
Black 100% have this trait	Bronze 32% have this trait	London 18% have this trait
LINE	**SKY**	**WALL**
Black 100% have this trait	Sunset 27% have this trait	Jungle 14% have this trait
WINDOW		
Brown 100% have this trait		



BRICK	BUTTON	CITY
Black 100% have this trait	Bronze 32% have this trait	London 18% have this trait
LINE	**SKY**	**WALL**
Black 100% have this trait	Blue 23% have this trait	Lightblue 14% have this trait
WINDOW		
Brown 100% have this trait		



BRICK	BUTTON	CITY
Black 100% have this trait	Grey 32% have this trait	Rome 32% have this trait
LINE	**SKY**	**WALL**
Black 100% have this trait	Blue 23% have this trait	Purple 18% have this trait
WINDOW		
Brown 100% have this trait		