Decentralised Image Sharing and Copyright Protection Using Blockchain

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Abstract: *Because social media platforms like Facebook, Twitter, and Instagram were designed as a way of having direct customer engagement, social media has become an essential aspect of our lives. Here, the issue is that despite these media promises to their customers on important issues like privacy and data security, such promises have not been followed. Social media networks are endangering user privacy in the name of profitability. The primary cause of these problems is the centralised nature of these media. Therefore, the project's goal is to create a decentralised application that would allow users to interact while maintaining their anonymity.*

Keywords: Blockchain, data integrity, privacy, decentralized, social media

I. INTRODUCTION

In the current era of internet, exchange of data over social media has been a very popular way of interaction. While doing this consumer data gets prone to and privacy leaks. To overcome these issues we are aiming to build a platform that can eliminate these issues and can bring transparency and security to the system. The paper demonstrates how using a Blockchain network coupled with use of perceptual hashes and appropriate smart contract logic can provide better mechanism for copyright violation detection than current systems along with many benefits of Blockchain such as permanent record of trade, transparency, trust, immutability, high availability, information security and cost savings.

1.1 Motivation

To rectify picture attribution and give proper credit to original image authors, which is a key problem for photographers who share their work on stock photo websites, a decentralised image sharing marketplace is fundamentally proposed. Our goal is to implement a reliable but quick copyright violation detection system. This can return control to image creators when paired with the advantages of Blockchain-based architecture. The purpose of this project is to get rid of some of the major concerns faced by users while communicating on social media platforms like privacy leaks and censorship and provide a safe and secure environment for consumers and allowing them to express their views and opinions while letting them avail their freedom of speech. Also, letting creators have full control of their data.

1.2 Proposed system
Interplanetary File System (IPFS)
Data could be saved and shared on a distributed file system using the Hypermedia and File Sharing Network (IPFS). While linking IPFS hosts, content-addressing is employed by IPFS in order to identify each file in a global namespace.

Smart Contracts
Buyer-seller contracts are written directly into lines of code in smart contracts, which are self-executing contracts. Its use makes transactions apparent, irrevocable, and searchable.
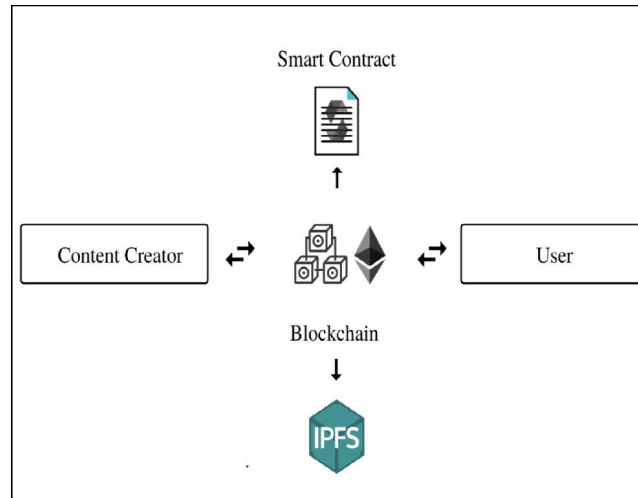Truffle framework, Ganache and Meta Mask are the dependencies that we are going to use in our application.

Fig: Components of a project

Hardware and Software Requirements

Hardware Requirements

- Processor (Intel Dual Core) : 2 GHz
- RAM : 4 GB o Hard Disk : 256 GB (Min)

Software Requirements

- Operating System :Windows 7 Onwards
- Coding language : Solidity, JavaScript
- Text editor: Sublime Tex

II. RESULTS

- Built and deployed a decentralized application so that the content is immutable and transparent.
- Establish a public interaction medium which provides data privacy and data integrity.
- Creators will be able to present their work on decentralized social media platforms.

III. CONCLUSION

We come to the conclusion that a blockchain-based solution for a virtual stock picture market offers many advantages over traditional marketplaces, including a high level of security, an ongoing history of trades, tailored licences, customised selling prices for images, higher contributor earnings, and the ability to store images in distributed storage using IPFS. The marketplace is unaffected by restrictions and meddling since there is no centralised authority. After careful consideration, we have come to the conclusion that perceptual hashes are reliable and useful techniques for identifying copyright violations. IPFS hashes are the sole data included in the Blockchain transactions for picture retrieval. Information security is maintained by encrypting material beforehand in the smart contract with a choice of encryption technique and then transmitting information via IPFS.

Only the right buyer is given access to the keys for decryption via the smart contract. Our solution is also scalable. Thus, the research presents a fresh use of an established technique to counter a pervasive, malevolent stock-photo industry practise.

IV. FUTURE SCOPE

In Only the right buyer is given access to the decryption keys via the smart contract. Our solution is also scalable. Thus, the research presents a fresh use of an established technique to counter a pervasive, malevolent stock-photo industry practise, either posted online or not. It may restrict both freedom of expression and access to information.

V. ADVANTAGES AND DISADVANTAGES

Advantages

- It is immutable and transparant medium of social media communication.
- Allows user to post their data while protecting their Privacy.

Disadvantages

- Censored data can also be published.

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