Blockchain-Based Copyright Protection for Creators

PROBLEM STATMENT

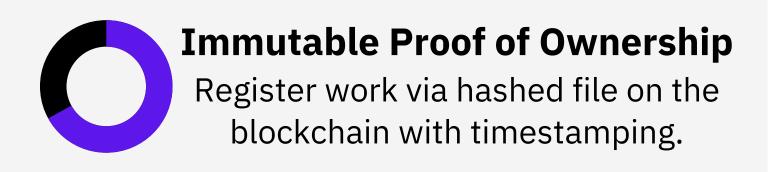
Challenges Faced by Creators:

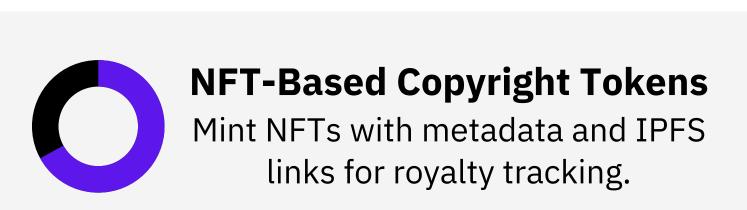
- Plagiarism & Unauthorized Use: Lack of a reliable way to prove authorship.
- Centralized Copyright Systems: Expensive, slow, and centralized mechanisms.
- Lack of Transparency: No real-time verification or public proof of ownership.
- Difficulty in Monetization: No direct mechanism for efficient licensing and sales.

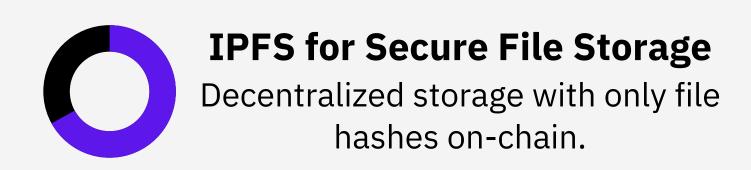
Why This Matters:

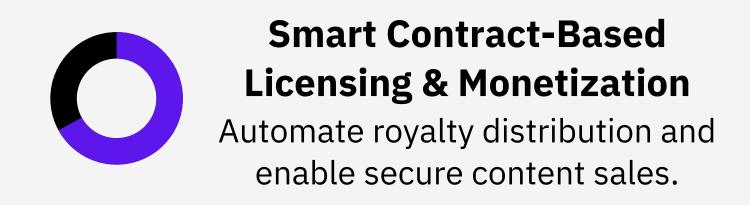
- Creators struggle to protect intellectual property.
- Current systems are inefficient and costly.
- A decentralized, transparent, and immutable solution is needed.

SOLUTION: BLOCKCHAIN COPYRIGHT PROTECTION SYSTEM









TECHINCAL ARCHITRCTURE OVERVIEW

Blockchain Integration (Algorand)

- Leverage Algorand's fast and scalable network for secure and immutable data storage.
- Store file hashes on-chain for proof-of-ownership.

NFT Minting with Algorand Standard Assets (ASA)

- Mint NFTs to represent digital assets with metadata and ownership details.
- Enable traceability and royalty management.

Decentralized Storage with IPFS



- Store digital content on the InterPlanetary File System (IPFS) for censorship-resistant storage.
- Prevents file tampering while reducing on-chain storage costs.

Smart Contract Automation



- Utilize Algorand smart contracts (PyTeal) for licensing agreements and royalty distribution.
- Automate payments and enforce copyright rules.

IMPLEMENTATION PLAN & TIMELINE

Research & Planning

Development

IPFS Integration & Data Storage

Frontend & User Interface

Testing, Deployment & Launch

- Define system architecture and technical requirements.
- Design smart contract logic and data flow.
- Develop Algorand-based smart contracts using PyTeal.
- Implement NFT minting for copyright registration
- Connect IPFS for decentralized file storage.
- Optimize blockchain interactions for efficiency.
- Develop a user-friendly UI with React.js & AlgoSDK.
- Implement dashboards for copyright verification & licensing.
- Conduct security audits and smart contract testing.
- Deploy on Algorand mainnet and onboard initial users.

EXPECTED IMPACT & OUTCOMES



Enhanced Copyright Protection

- Provides creators with immutable proof of ownership using blockchain.
- Reduces plagiarism and unauthorized use of digital content.



Decentralized & Transparent System

- Eliminates reliance on centralized authorities for copyright verification.
- Enables public auditability and real-time verification of ownership.



Fair Monetization for Creators

- Smart contracts automate royalty distribution and content licensing.
- Ensures creators receive fair compensation for their work.



Adoption & Scalability

- Open-source and hackathonfriendly solution encourages developer contributions.
- Scalable for use across industries like music, art, journalism, and photography.

Institution:

Ajeenkya DY Patil School of Engineering, Pune

- **Team Members:**
- Momin Md. Insha Engineering, Second Year
 - Parth Ghag Engineering, First Year
- Passionate about blockchain and innovative tech solutions.

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