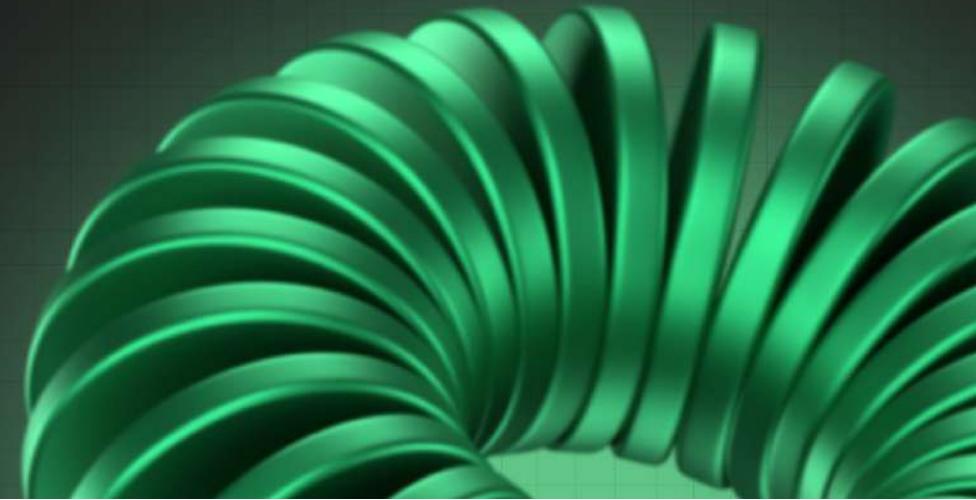


Cardano

HACKATHON ASIA
IBW Edition 2025

Innovation partner **H2S** HACK2SKILL

Advance your ideas at
India **blockchain week**



Team Name : int21h

Team Leader Name : Sanat Kulkarni

Problem Statement : **zkArtano** — Enabling private, proof-verified minting of AI-generated art

Brief about the Idea:

A web dApp where creators generate AI art, upload it to IPFS, and mint it as limited-edition NFTs on Cardano. Zero-knowledge proofs let users prove ownership privately without revealing identity or metadata. Artists earn ADA directly, with provenance and credit baked into every NFT.



Opportunity should be able to explain the following:

- Most NFT platforms separate art creation from minting, use high-fee chains, and expose ownership publicly. AI art floods markets with no scarcity. Our solution combines AI, Cardano, and zk-privacy into one seamless flow solving credit, cost, and privacy in one go.

Challenge	Existing Tools	Our Fix
No built-in AI	Midjourney + OpenSea	One-click AI → Mint
Public ownership	Ethereum NFTs	zk-Proof: Prove, don't show
High gas fees	\$50+ per mint	Cardano: ~\$0.20
Infinite AI copies	No edition control	Policy-locked supply (1/10, 1/1)

List of features offered by the solution

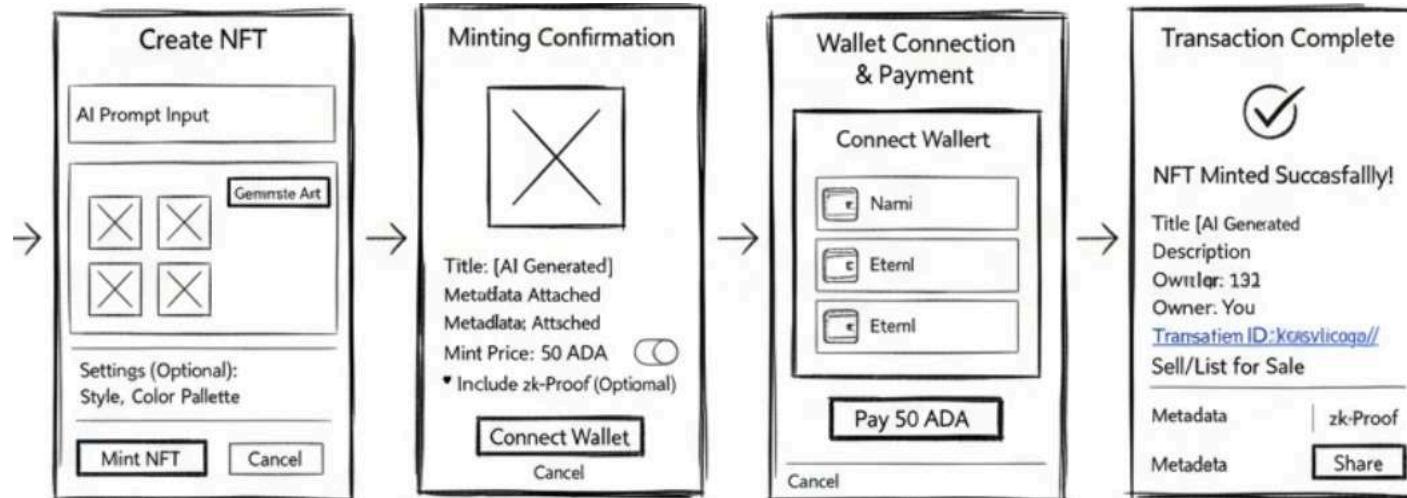
Users generate **unique AI art** via natural language prompts. Art is stored **decentralized on IPFS**, with rich metadata (artist, date, hash). NFTs are minted as **native Cardano assets** with **strict policy scripts** for scarcity. zk-Proofs enable **private sales, whitelists, or ownership proof**. All in a sleek UI.

- **AI Art Engine** → Prompt + style controls
- **IPFS + Metadata** → Permanent, verifiable
- **Cardano Minting** → Limited editions, ADA payments
- **zk-Privacy Layer** → Prove ownership, hide identity
- **Dashboards** → Earnings, provenance, proof status

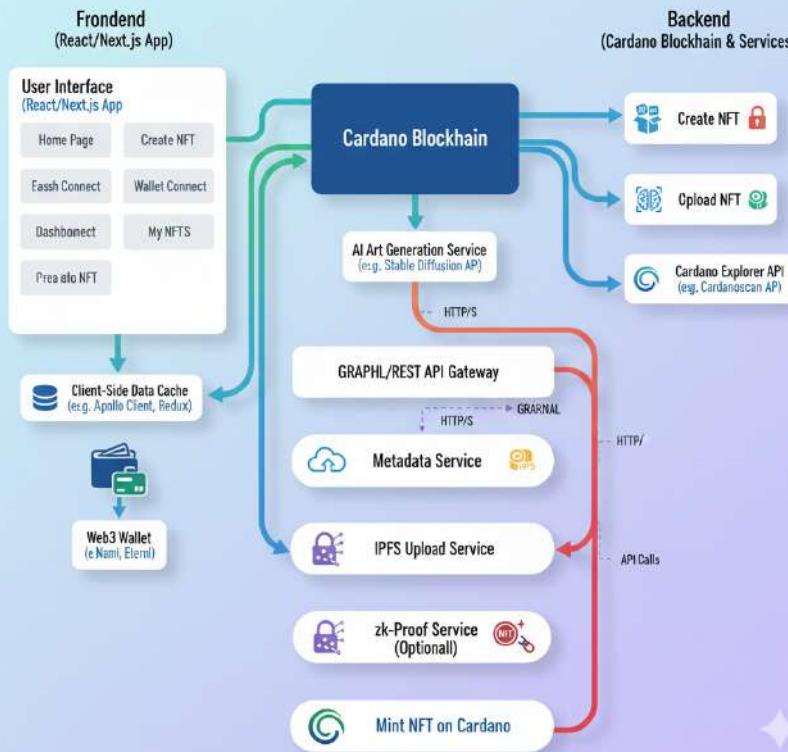
Process flow diagram or Use-case diagram



WireFrame/Mock Diagram for the Project



AI NFT MINTING PLATFORM ARCHITECTURE



Architecture diagram of the proposed solution

Technologies to be used in the solution:

Frontend: React + Next.js + Cardano Wallet SDK

Backend: Node.js + Stable Diffusion API

Storage: IPFS (Pinata) + PostgreSQL

Blockchain:

- **Cardano** → NFT minting, metadata, payments
- **Midnight** → zk-SNARKs for private ownership & sales **zk-Proofs:** Groth16 / Halo2 (via Midnight)

Estimated implementation cost:

Item	Cost
Frontend + Wallet	\$600
Backend + AI API	\$800
Cardano Minting	\$400
Midnight zk-Proof	\$700
IPFS + Hosting	\$200
Total	\$2,700

Add as per the requirements for the hackathon:

This isn't just an NFT platform — it's the future of private, creator-owned digital art.

AI + Cardano + Midnight = unbreakable provenance, zero privacy leaks, global access. We do believe that Cardano ecosystem will help us take this project to the next level.

Will be Built by serial hackathon winners

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Thank you

