Spring 2023 CPSC 559-01 13973

Final Project

Topic: Exploring the Use of NFTs in the Creative Industry Using Blockchain Technology" for the final project.

Team Name: CryptoPro

Team Members:
Dhruti Patel 885189795
Pratishtha Soni 885587907
Tejashwa Tiwari 886226489
Madhura Mehta 885205286

Instructor: Wenlin Han

A short description of your project:

Our project aims to explore the use of NFTs in the creative industry, leveraging blockchain technology to enable greater transparency, security, and efficiency in the creation and distribution of digital assets. We will review existing literature and use cases, develop a framework for using NFTs in the creative industry, explore the technical aspects of using blockchain technology, and apply the framework to a case study of a creative project.

Changes in the project:

1. ### UI changes:

   1. Swapped out button colors
   2. Header color changes
   3. Removed toolbar and primary menu
   4. Added a dark theme switch (default: light theme)
   5. Adjusted header margins and improved responsiveness

2. ### Mumbai Faucet Deploy:

   The Mumbai faucet allows developers and users to obtain Mumbai testnet tokens for free, which they can use to test their smart contracts, applications, and other tools built on the Polygon network. The Mumbai faucet is usually available through a website or a command-line interface, and it requires users to provide a valid wallet address for the Mumbai network to receive the testnet tokens.

3. ### Changed NFT:

   We changed our NFT from Animals to Flower. We created NFTs such as Sunflower, Lily and Lavender. We gifted each other these NFTs on Open Sea Testnets to understand its functionality more. Also, We added our NFTs for sale on the Open Sea marketplace.

4. ### Opensea Marketplace Deploy:

   1. Created NFT smart contract: We'll need to create a smart contract that defines the characteristics and behavior of our NFT. We can use a pre-built NFT smart contract or create our own.

2. Mint our NFT: Once our NFT smart contract is ready, we can mint my NFTs. This involves creating unique tokens based on our smart contract that represent our NFTs. We need to specify the metadata for each NFT, which includes details such as the name, description, image, and any other relevant information.

3. Prepare our NFT for listing: Before we can list our NFT on OpenSea, We need to ensure that it meets the platform's requirements. This includes having high-quality images, a clear and descriptive title, and accurate metadata.

4. List our NFT on OpenSea: Once our NFT was ready, we listed it on the OpenSea marketplace. This involved creating a new listing on the platform and specifying the price and quantity of our NFT.

By following these steps, we successfully deployed our NFT representing a flower on the OpenSea marketplace and started selling it to interested buyers.

5. Changed Code and Json:

1. Changed the meta-data of the existing NFT in mint.js file.
2. Changed the image, description, attributes (background, color and name).
3. Hosted the images on a server so that it can run globally and not just on localhost/local computer.
4. As mentioned above, added a couple UI-based changes within app.jsx and header.jsx file under react components.

6. Conclusion:

In this project, our group successfully made changes to an existing codebase, introduced new UI features, and deployed our solution on the Mumbai faucet for testing. Additionally, we changed our NFT to represent a flower and deployed it on the OpenSea marketplace.

Through this project, we gained valuable experience in modifying existing codebases and creating NFTs. By deploying our solution on the Mumbai faucet, we were able to test our solution and make necessary improvements before listing it on the OpenSea marketplace.

Overall, this project was a success, and we are pleased with the results. The changes we made to the existing codebase, the addition of new UI features, and the deployment of our solution on the Mumbai faucet and OpenSea marketplace have all contributed to the project's success. The project was completed through the collaborative efforts of our group members, and we are proud of what we have accomplished together.