The ease of access of cameras and communication devices has given the average citizen a direct chance at contributing to news and media. Although it is a great step towards democratisation of information, the trend also poses the risk of enabling the fast spread of something far more volatile: misinformation through misuse of these photos.

The goal of the project is to create a new platform that allows user’s the same freedom of freely contributing to the news cycles while verifying that this information really was collected at the time and place it is said to have been collected. The solution makes use of Ethereum blockchain, allowing the users to upload their photos on a decentralised platform while allowing journalists to feature this media easily.

The workflow of the platform consists of a mobile dApp based on React Native with Expo which allows users to upload images onto the distributed IPFS network. The rest of the image data, including the IPFS hash ID of the image, along with all the EXIF metadata like the time, location and camera with which the photo was clicked is uploaded onto the Ethereum based blockchain using our smart contract.

Since the authenticity of these images is verified by the blockchain, journalists can access these images and feature them in their articles using our website.

The platform serves as a successful proof of concept of a blockchain for images which can combat fake news by verifying image authenticity and providing easy access to these image to journalists. It offers an intuitive UI which allows the app to be used even by anyone with no expertise with blockchain, thus empowering the average citizen journalist.

Future iterations of the system can include support for other files such as videos and audio clips, along with use of machine learning to further improve similarity detection and image search.

**DApp**
- Inbuilt camera to ensure photo has not been edited before uploading.
- One click upload of image and metadata to blockchain and IPFS, easy to use even for a novice.
- Ability to attach related articles and tags to the image.
- Instant generation of IPFS image link which can be viewed on the browser.
- View all images uploaded by other users on the blockchain through a grid view.
- Login and registration system to protect data.
- View similar images on the blockchain to obtain more information.

**Website for Journalists**
- Material UI for elegant experience
- Search for verified images on the platform using tags.
- Additional authentication: Automatically filters flagged images
- View image metadata and other details
- One click ability to embed image in a news article as a journalist
- Automatic green border and link to the IPFS hash of original image added for news consumer convenience.

**Backend, Storage and Blockchain**
- Image stored on IPFS to prevent blockchain performance reduction due to bulk.
- Image metadata stored on Ethereum network, ensuring data is transparent, decentralised and still immutable.
- Pixelmatch library used with Celery parallel workers to flag fake images based on similarity to existing images on the platform.
- Easy login and sign up system implementation
- MongoDB incorporation for image caching to boost system performance.

**Conclusion**