

### Project Title

meDossier

### Profile Photo

[anukoirala55@gmail.com](mailto:anukoirala55@gmail.com)

[ranjugc69@gmail.com](mailto:ranjugc69@gmail.com)

Project Profile: <https://drive.google.com/file/d/16tshab7mNIFlstVCdfyBzcMXOpYbNmgy/view?usp=sharing>

### Team Name

Anupama Koirala

Ranju G.C.

### Github link

<https://github.com/Itshyphen/meDossier>

### Linkedin Profile

<https://www.linkedin.com/in/anupama-koirala/>

<https://www.linkedin.com/in/ranju-g-c-982222195/>

### Project Description (at least 500 words)

## **What is “meDossier” ?**

“meDossier” is a blockchain-based web app to assist secure and transparent medical report management integrating the system with the IPFS (InterPlanetary File System) server. The main objective of our proposal is to enable decentralized access control for medical records between a patient and a doctor, along with interacting with various other entities. This app is based on the Ethereum-based blockchain architecture along with the frontend as react.

## **Problem Statement**

Medical facilities have evolved gracefully over the years. Most of us are still witnesses to the fact that whenever we visit a doctor, we must present a pile of our medical files to the doctor. The file consists of medical reports, X-rays, previous prescriptions, etc. The person who visits the doctor frequently will most likely have a file filled with various pieces of paper, making it appear frighteningly full. It is tedious work to keep all these records safe. There are high chances of losing such important files. Although there are certain platforms to store medical records in the cloud, they are not very reliable. They are centralized by certain authorities that will have full access to the records, making them insecure.

## **Proposed Solution**

Blockchain is a promising technology that has the potential to reshape the way data is being controlled or managed in existing medical records management systems. The decentralized architecture of blockchain can guarantee that the medical records are stored in a manner that is an immutable, traceable, transparent, auditable, and secure manner. Also, blockchain can enable individuals to manage their health records information so they can authorize certain entities to securely access and update their Personal Health Record(PHR).

## **How does ‘meDossier’ work?**

1. Patients and doctors can add their details to the blockchain. The doctor should be verified by a government authority to be able to use meDossier as a doctor.

2. Whenever the patient visits a doctor, the doctor sends the request for access to the patient and can access or upload the patient's medical report with the help of the IPFS after the patient approves of the request access.
3. The hash value of the patient's medical record with the storage in IPFS is stored in a smart contract in an encrypted form.

### **Users functions:**

A patient is able to do following functions:

- Register to the app
- Add reports along with details about visiting hospital
- Can give and revoke access from the doctors
- View their records

A doctor is able to do following things:

- Register to the app
- Can use the app only if their license is registered
- Access and add the records of their patients if they are accessed by patient

The registration office is able to do the following thing:

- Register Doctors' license
- Access registered doctors details

Thus, our proposed system helps to overcome all the issues faced in the centralized system such as distributed denial of service attacks(DDoS), privacy. 'meDossier' implements blockchain technology to secure medical records sharing and management. 'meDossier' not only provides a dependable service but also speeds up the interchange of medical records. The functionality of 'meDossier' can be enhanced in the future in other areas of the medical field such as drug traceability. Along with this, we can add more than one government agency for the authentication process as we have used our contract deployer address as a government agency for now.

### Live Demo

<https://medossier.netlify.app/>

### Video Demo Link (1-2min long)

<https://drive.google.com/file/d/1izcKQWjqOoc2HcaZCJ1Hn03vaYajrZA6/view?usp=sharing>

### Screenshots of the project

<https://drive.google.com/drive/folders/1ZXPXmdguTTLgMr8DAs4I2kURuuDyKPjM?usp=sharing>