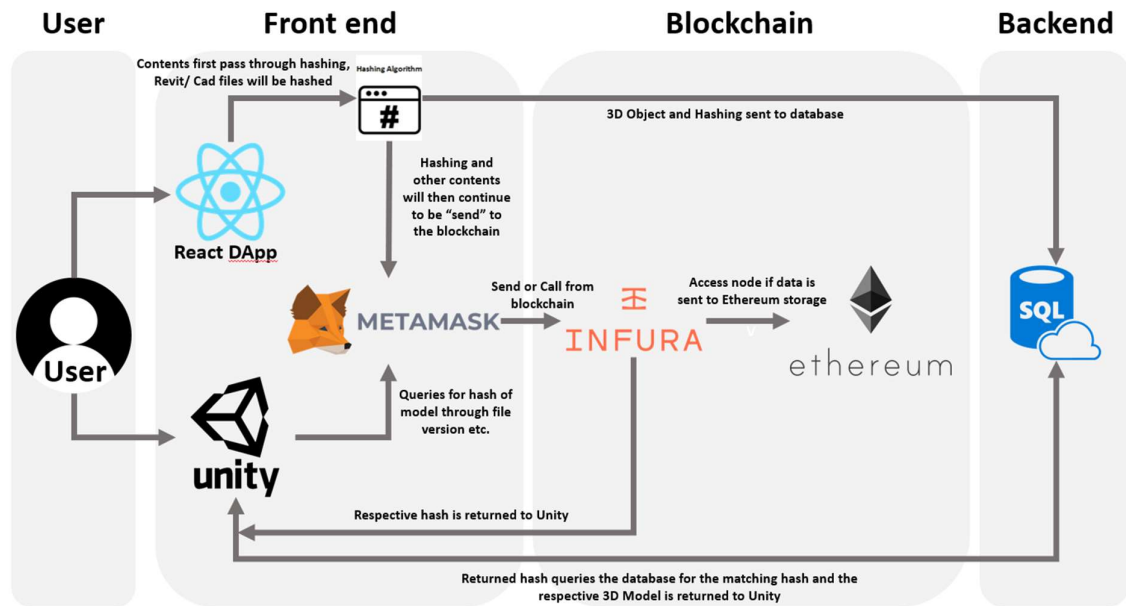


Bi-Weekly Report #3

The proposed system architecture:



Step 1: Users provides input through Front end DApp, there are two sources, Unity and the React app.

Step 2.1 (Pushing data) :

- React:
 - o Data will be sent to hashing algorithm where 3D models will be hashed (non-3D - model data are not hashed) , the hash value along with the other data will be sent to the blockchain. Currently done through Infura as a rpc but we plan to migrate it to the Azure blockchain service soon as we are currently on the Ropsten Testnet as it doesn't utilize real ETH.
 - o The hashed model along with a copy of the 3D model will be sent to an off-site database.
- Unity:
 - o Our current plans for the Unity AR app is that Unity will only have the ability to fetch or view 3D model data stored on the blockchain, it will not be able to push data to the blockchain. Hence it will only need to access Infura to get the hash function of the respective model inputted.

Step 2.2 (Retrieving data):

- React:
 - o Parameters will be inputted to the retrieval form and the data will be obtain from Infura as it is only a view function.
 - o Infura returns the data stored to the front end React app.
- Unity:
 - o Parameters will be inputted to the retrieval form and the data will be obtain from Infura as it is only a view function, Infura will return the hash function to Unity.
 - o Hash function obtain will be sent to the database and queried through SQL to find a matching hash.

- The respective 3D model of the matched hash is returned to Unity and displayed in Unity.

Future plans:

- Implementation of the hash function
- More detailed storage of data
- Setting up the database
- Ability to access unity app through front end React App