

Abstract

Counterfeit academic certificates and qualifications are a common problem in recruitment. Not only do employers face the challenge of sorting through all candidate applications, they also need to check that the certificates presented are authentic (Tavares Serranito et al., 2020). Further, there is need to curb the rampant degree forgeries and ensure degree certificate traceability is to the right graduating institution. It is also important to ensure accountability of all degree certificate holders and that their awarded certificates would be traced back and verified at their graduating universities (Filipe & Dias, 2018). Robotic cameras are used for scanning, and Arduino Uno device for storing the certificate data. Blockchain is then used to control the access of the encrypted certificate data generated in the chain of blocks, through a smart contract. Any request for viewing the certificate is granted by a smart contract. If request is granted, the hash address is used to retrieve the certificate. With the implementation of blockchain technology in universities, the issue of certificate forgery could be minimised. Certificate forgery is a disadvantage to the society in that holders of forged papers attain offices on assumed merit – “forged” merit. Therefore, leveraging on the strengths of the blockchain technology of smart contracts, cryptocurrency and tokenizing, immutable distributed ledger, cryptographic hashing, and digital signature (Gourisetti et al., 2020), certificate forgery is addressed by implementing blockchain in universities. Graduation certificates and transcripts contain information confidential to an individual and which should not be easily accessible to others. Individual attributes once defined, and the approved certificate is awarded to the graduand, the record remains unaltered with blockchain technology..