RESEARCH BROWN BAG

Title of Presentation

Digitising Academic Certificates Using Blockchain to Curb Fraud: The Case of a Kenyan University

Abstract

The prevalence of fake academic certificates in the country is worrying. This has come to light in the media during the vetting process during the recruitment of candidates for key public sector positions. The fraudulent use of fake qualifications is a fact that educational institutions and employers have to face. To curb the trend, institutions have taken measures that usually involve a third party to verify the authenticity of educational certificates. The main weaknesses of this approach is that the time taken to verify certificates is too long. Additionally, using an intermediary introduces aspects such as extra costs and the potential inaccessibility to institutions in all geographies. This project proposes to set up a system that not only makes it easy to maintain records of academic achievement but also make the fast and effective verification of a certificate's authenticity possible. The system will rely on distributed digital ledger technology (blockchain) to accomplish this goal. A blockchain contains records of transactions that are replicated across many systems. The records are cryptographically guaranteed to be immutable. This research intends to leverage these and other features of distributed ledgers in order to develop a system that can address the issue of fake certificates.

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About Richard and Eunice

Richard Otolo is the IT Security Function Manager at @iLabAfrica. He holds a BSc in Electrical and Electronics Engineering (2013) and a BSc in Telecommunication and Innovation Engineering from Jomo Kenyatta University of Agriculture and Technology. He also holds MSc in Mobile Telecommunications, Innovation for Development from Strathmore University. He is certified in the following: Certifed Ethical Hacker, Certified EC-Council Instructor, Fortinet Security Expert, Microsoft Certified Professional and Pure Cloud Core Professional. He has over 5 years' experience in IT project implementations and consulting, having worked for Fintech Kenya, CRDB Bank Tanzania, Rwanda Cooperative Agency, and Crescent Tech Kenya.

Eunice Maingi leads the Blockchain Research Group at the IT Security Function in @iLabAfrica. She has a Bachelor of Business Information Technology (first class honours) from Strathmore University. She holds CISA Certification and has a more than 5 years' experience in Systems Audit. She has also experience in IT projects management and IT training. She is currently pursuing Certified Ethical Hacker certification.

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