

REV2023 Special Session Call for Papers

Title

Blockchain Applications in Education

Acronym

BAE

Overview

Blockchain technology is a decentralized platform that can act as a single source of truth, establish the provenance of data and thus realize a trusted infrastructure. This digital infrastructure may be used to validate significant assertions and credentials, such as academic and educational records. Within education, there is a strong global movement toward using blockchain technology for issuing, sharing, and verifying educational experiences and qualifications. Blockchain promises, among others, a better level of control over funding and investing in education, the implementation of educational initiatives, a certification/accreditation system and learning. With only a few institutions utilizing the technology, blockchain adoption in education is still in its infancy. Currently, the majority of institutions that have adopted blockchain, primarily use it to store and distribute academic records and credentials. However, the technology has the potential to revolutionize education in a variety of ways, including enhancing opportunities for lifelong learning, increasing the efficiency of teaching methods through the use of smart contracts, and giving students ownership of their academic records. Blockchain's immutable and nearly indestructible nature is chiefly responsible for its versatility. These attributes have caught the attention of researchers interested in applications and environments, where the requirement for the integrity of content and identity is just as important as the safe delivery and record of transactions. Self-sovereign identity (SSI) is frequently highlighted as a human right that nations must uphold with the same fervor, as education and lifelong learning are considered to be a public good. With the help of SSI, higher education institutions may provide their students "digital credentials", that allow them to prove their educational achievements to anyone.

This special session aims to investigate the feasibility, challenges, benefits and risks of blockchain technology in education, with an emphasis on the application of the blockchain to formal and non-formal credentials.

Topics

- Applications of blockchain systems in education
- Methods, techniques and theories for blockchain in education
- Architectures and platforms for blockchain in education
- Blockchain security and privacy solutions in education

- Blockchain and decentralized architectures in education
- Performance evaluation of blockchain schemes in education
- Smart contracts in the blockchain ecosystem for education
- Self-sovereign identity and digital credentials in education
- Usability evaluation of distributed blockchain-based application in education
- Blockchain certification and verification of educational activities

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