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Towards academic and skills credentialing standards and distributed ledger technologies

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**Abstract**

Today's internet-connected world is moving towards evermore digitisation. Consequently, the education system globally is experiencing various problems whilst trying to keep up with this disruptive and ongoing change that is introduced. One way to alleviate the problem is standardising how skills and academic achievement are quantified, digitised, authenticated and persisted to achieve a means of automated verification and matching of the current need with what skill-sets are available. This research aims to provide a starting point towards a standardised future solution which considers existing emerging standards and technologies to provide skills tracking capability. The existing standards, data schema, technologies and techniques are discussed and an existing real-world prototype architecture is identified. This prototype's terminology is then mapped to the emerging World Wide Web Consortium (W3C) standards which will serve as a baseline design.