**Global Blockchain Hackathon, 2018**

**Blockchain based degree verification system**

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**Problem:**

Academic credential fraud is a reality and counterfeiting documents is getting easier day by day. Fake certificates are a big problem in India, and several other countries as well. Generation of fake certificates in India alone, produces a revenue of over five million every year. A fake certificate in India can be generated for as low as Rs, 2,000. The problem is so profound that universities and companies, hiring freshers, typically have to spend crores of rupees to verify the certificates and transcripts of applicants.

**Proposed Solution:**

A digital certificate based on a distributed ledger technology (like Blockchain) could address this problem. In case of digital certificates, verification/authentication could be done via an app, or a web portal. This authentication is also almost instantaneous, as opposed to the current authentication which consume days, or even weeks. Another advantage of this solution is that records cannot be tampered with since changes to individual blocks can be made only with the approval of all parties on the blockchain.

**Requirements:**

Technical Requirements

a. Blockchain Implementation – Solidity, Truffle, MetaMask

b. Front end Implementation – HTML5, CSS3, JavaScript, jQuery

c. Testing framework – Mocha Unit Testing Framework, Chai Assertion Library

**Objectives:**

1. This system allows institutions to issue digitally stamped certificates.

2. Digital signatures ensure the authenticity, integrity and non-repudiation of the certificates

3. Authentication is instantaneous, which saves the tedious work that back end service providers and companies do currently.