**User Authentication using Block chain Technology**

Project Abstract

by

CMPE 295A

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**ABSTRACT**

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In this era of computing, the major challenge in terms of security is authenticity of a user. The legitimacy of a user is very critical in diverse business processes like Job Application, using Online Services, Banking, and Government Purposes etc.

Focusing on various domains, Job applications require employers to hire 3rd party vendors for the background check of the candidate. An online service’s first step to verify authenticity is using credentials assigned to a user. Banking and Government relies on providing various state issued proofs for validation. Currently, there are a couple of solutions to tackle such problems namely Background Check Service Organizations, relying on other service providers for Authentication (for example Okta), storing your passwords in the browser. Although these services are good enough, some of the problems encountered here are tedious processes and waste of time, resources and money, credentials to be remembered for each and every service, Denial of Service attack on third party (for authentication) or the service provider, Remote Attacks on the Host, the server of some services getting compromised and ending up in exposing critical information of their users, state issued proofs are prone to tampering easily.

In this project, we propose a gamification approach to validate a user using the Block chain Technology. Leveraging cryptographic principles, we build a ledger which helps in verifying the authenticity of a user. This ramifies the current problems stated above. Using the principles of distributed systems, the stored ledger of the user information remains unaltered and authentic because a block can only be added after majority members of the network possessing that ledger verify its validity.