Certificate Validation Using Blockchain Ethvalidify

A PROJECT REPORT

Submitted by,

Mr. Nandeesh Gowda C	- 20201CSE0697
Mr. Hruthik S	- 20201CSE0682
Mr. Sudarsh V	- 20201CSE0683

Under the guidance of,

Ms. Naiwrita Borah

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

At

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS
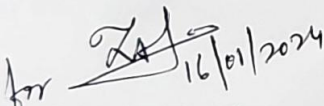
PRESIDENCY UNIVERSITY
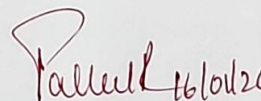
BENGALURU

JANUARY 2024

PRESIDENCY UNIVERSITY
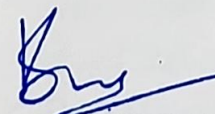
SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
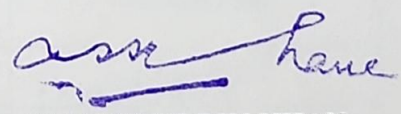
CERTIFICATE

This is to certify that the Project report **"Certificate Validation Using Blockchain-Ethvalidify"** being submitted by "NANDEESH GOWDA C, HRUTHIK S, SUDARSH V" bearing roll numbers "20201CSE0697, 20201CSE0682, 20201CSE0683" in partial fulfilment of requirement for the award of degree of Bachelor of Technology in COMPUTER SCIENCE AND ENGINEERING is a bonafide work carried out under my supervision.

Ms.Naiwrita Borah
Assistant Professor
School of CSE
Presidency University

Dr. Pallavi R
Associate Professor& HoD
School of CSE
Presidency University

Dr. C. KALAIARASAN
Associate Dean
School of CSE&IS
Presidency University

Dr.L. SHAKKEERA
Associate Dean
School of CSE&IS
Presidency University

Dr. SAMEERUDDIN KHAN
Dean
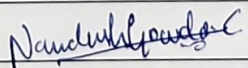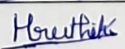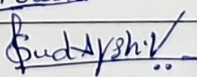School of CSE&IS
Presidency University

PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **Certificate Validation using Blockchain - Ethvalidify** in partial fulfillment for the award of Degree of **Bachelor of Technology** in **Computer Science and Engineering**, is a record of our own investigations carried under the guidance of supervisor **Ms. Naiwrita Borah, Assistant Professor, School of Computer Science and Engineering, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

NAME	ROLL NUMBER	SIGNATURE
Nandeesh Gowda C	20201CSE0697	
Hruthik S	20201CSE0682	
Sudarsh V	20201CSE0683	

ABSTRACT

In today's digital age, guaranteeing the credibility and legitimacy of certificates and credentials is paramount. Conventional methods of verifying certificates encounter issues surrounding security, trustworthiness, and accessibility. This initiative aims to tackle these obstacles by harnessing blockchain technology to establish a secure and unchangeable system for certifying credentials. The proposed system employs a decentralized blockchain network to securely store and manage certificates. Each certificate undergoes cryptographic hashing and is documented on the blockchain, forming an unalterable and transparent record. Smart contracts are utilized to automate the verification process, streamlining the validation of certificates without necessitating intermediaries. Users engage with the system through an intuitive interface, allowing them to submit certificates for validation of the legitimacy of the certificate. A convincingly crafted counterfeit certificate is challenging to distinguish from the genuine original. As instances of fraudulent documents rise, the credibility of both the individual holding the certificate and the issuing authority becomes compromised. The system promptly delivers dependable verification outcomes, guaranteeing the trustworthiness and integrity of presented credentials. We are creating a system in which an institute can upload student Credentials to a community blockchain network. Also to authenticate the institute we are introducing another actor named Central Authority which can add the new institutes to the network. At last, comes the employer who can verify the deployed Certificate. Furthermore, the decentralized nature of blockchain ensures transparency in the validation process, eradicating reliance on centralized authorities and mitigating the risk of counterfeit certificates. Additionally, we will be utilizing the meta mask crypto wallet for deploying the certificates and infura as our node for connecting with the Ethereum blockchain. In the paper discussed below, we tried our best to find out the answers to the loopholes in the certificate validation by utilizing an advanced technology called Blockchain.

ACKNOWLEDGEMENTS

First of all, we are indebted to the **GOD ALMIGHTY** for allowing me to excel in our efforts to complete this project on time.

We express our sincere thanks to our respected ~~dean~~ **Dr. Md. Sameeruddin Khan**, Dean, School of Computer Science and Engineering, Presidency University for getting us permission to undergo the project.

We record our heartfelt gratitude to our beloved Associate Deans **Dr. Kalaiarasan C and Dr. Shakkeera L,** School of Computer Science and Engineering, Presidency University and Dr. Pallavi R, Head of the Department, School of Computer Science and Engineering, Presidency University for rendering timely help for the successful completion of this project.

We are greatly indebted to our guide **Ms. Naiwrita Borah,** Assistant Professor, School of Computer Science and Engineering, Presidency University for her inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the project work.

We would like to convey our gratitude and heartfelt thanks to the University Project-II Coordinators **Dr. Sanjeev P Kaulgud, Dr. Mrutyunjaya MS** and also the department Project Coordinators **Mr. Zia Ur Rahman, Mr. Peniel John Whistely** .

We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project.

<div align="right">

Nandeesh Gowda C - 20201CSE0697
Hruthik S - 20201CSE0682
Sudarsh V - 20201CSE0683

</div>