BlockCred

01 The Misfits

THE MISFITS

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Theme: Blockchain

PROBLEM STATEMENT

The lack of transparency in the issuing process, a seeming disconnect between the two ends and security loopholes all plague the various existing systems used for credential issuing and verification.

The customer base of the existing systems have to go through a cumbersome process of issuing and claiming credentials.

High transaction costs linked with third-party systems is an additional flaw of existing solutions.

OUR SOLUTION

Blockchain-powered credentials

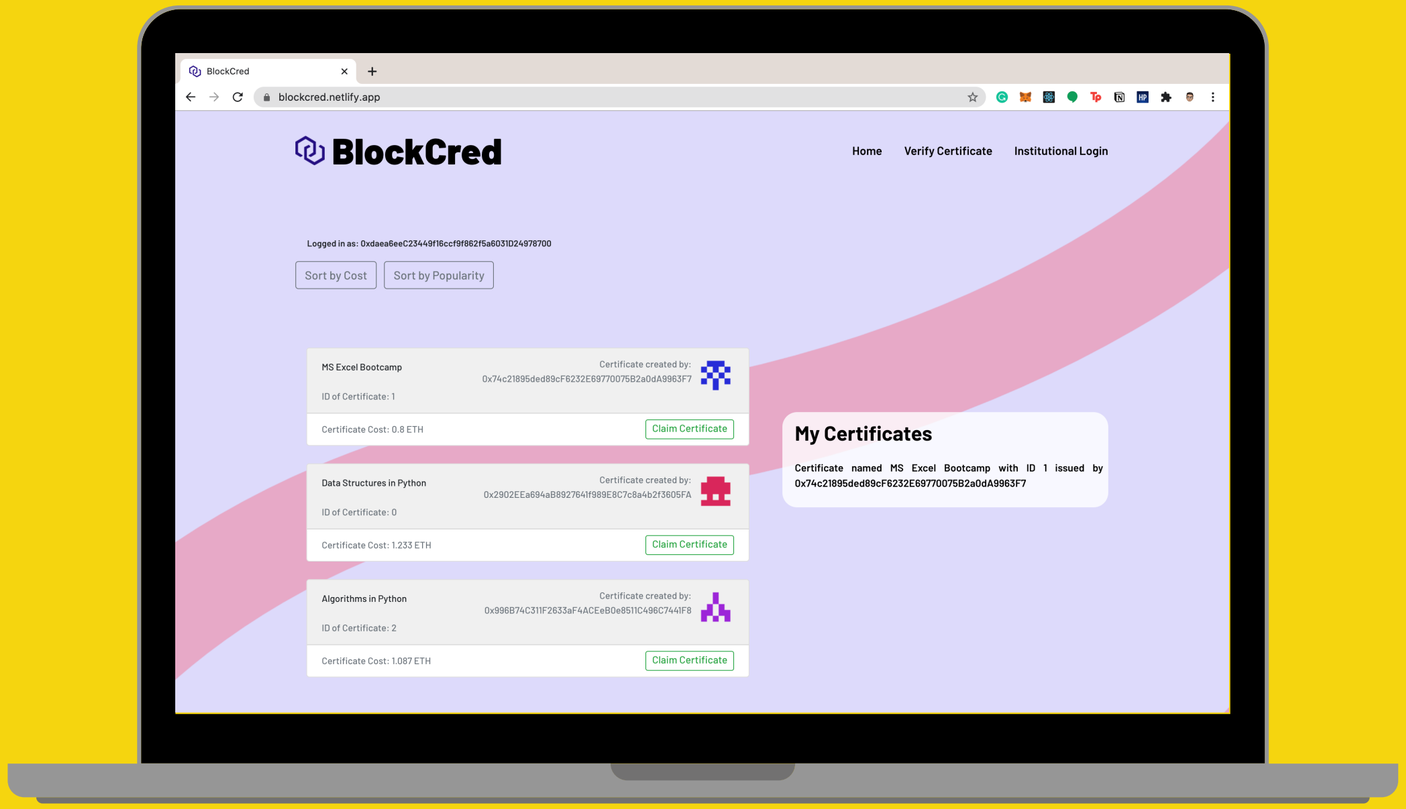
A platform to securely issue and verify digital credential would go a long way to help both the issuing institutions and the receiving individuals.

Our platform, BlockCred allows complete transparency and authentication of digital badges.

On the part of the institutions, it serves a platform to fish out authenticated candidates interested in availing their services, and on the part of the candidates, it offers a seamless process for getting rewarded.

Home Screen

Browse all certificates and track your credentials



TECHNICAL IMPLEMENTATION

Our solution makes use of the Ethereum blockchain and connects to it via an Infura node. Using Ethereum allows for a secure and transparent system for issuance and verification.

BlockCred's Web Application is built on React. The application is deployed using automatic deploys with GitHub and Netlify.

Key Frameworks

React

Metamask

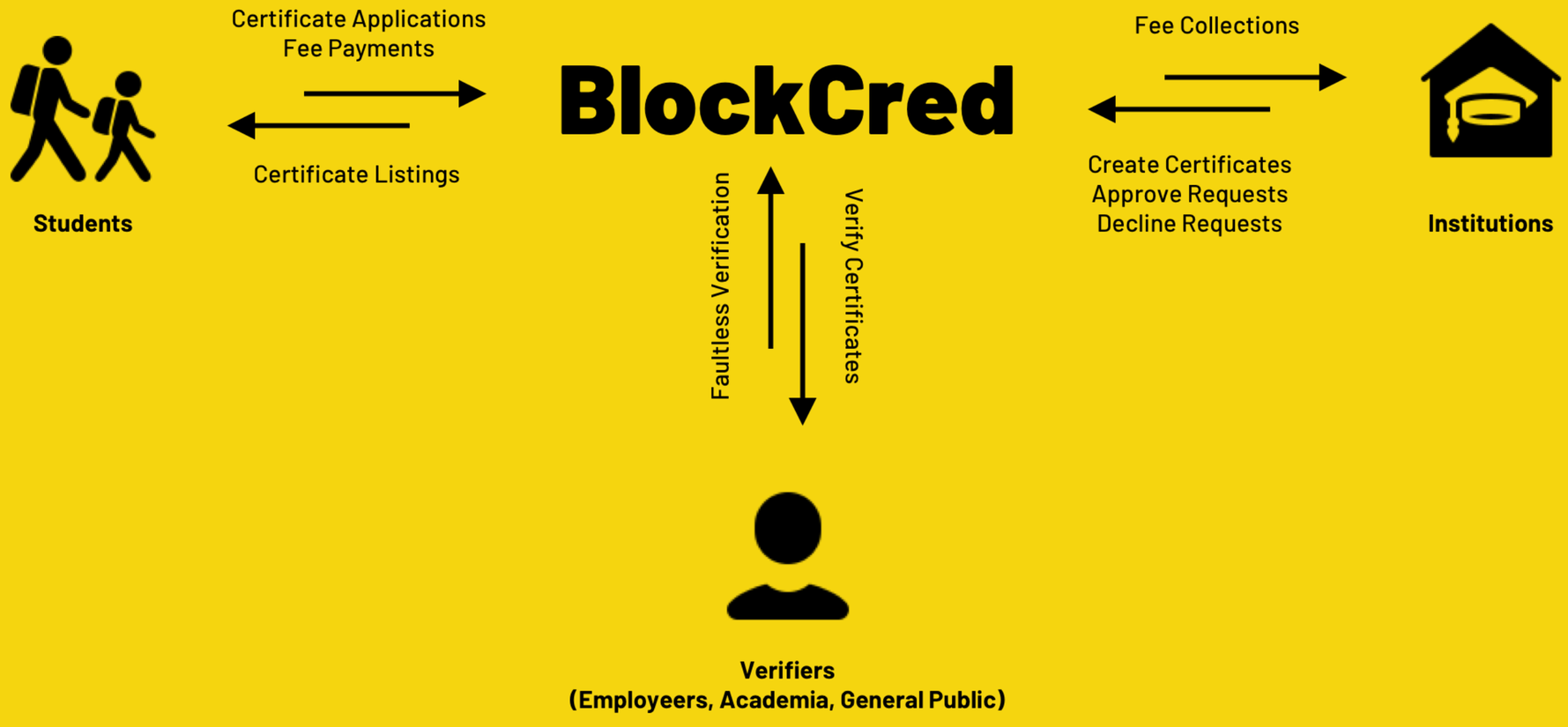
Ethereum Blockchain

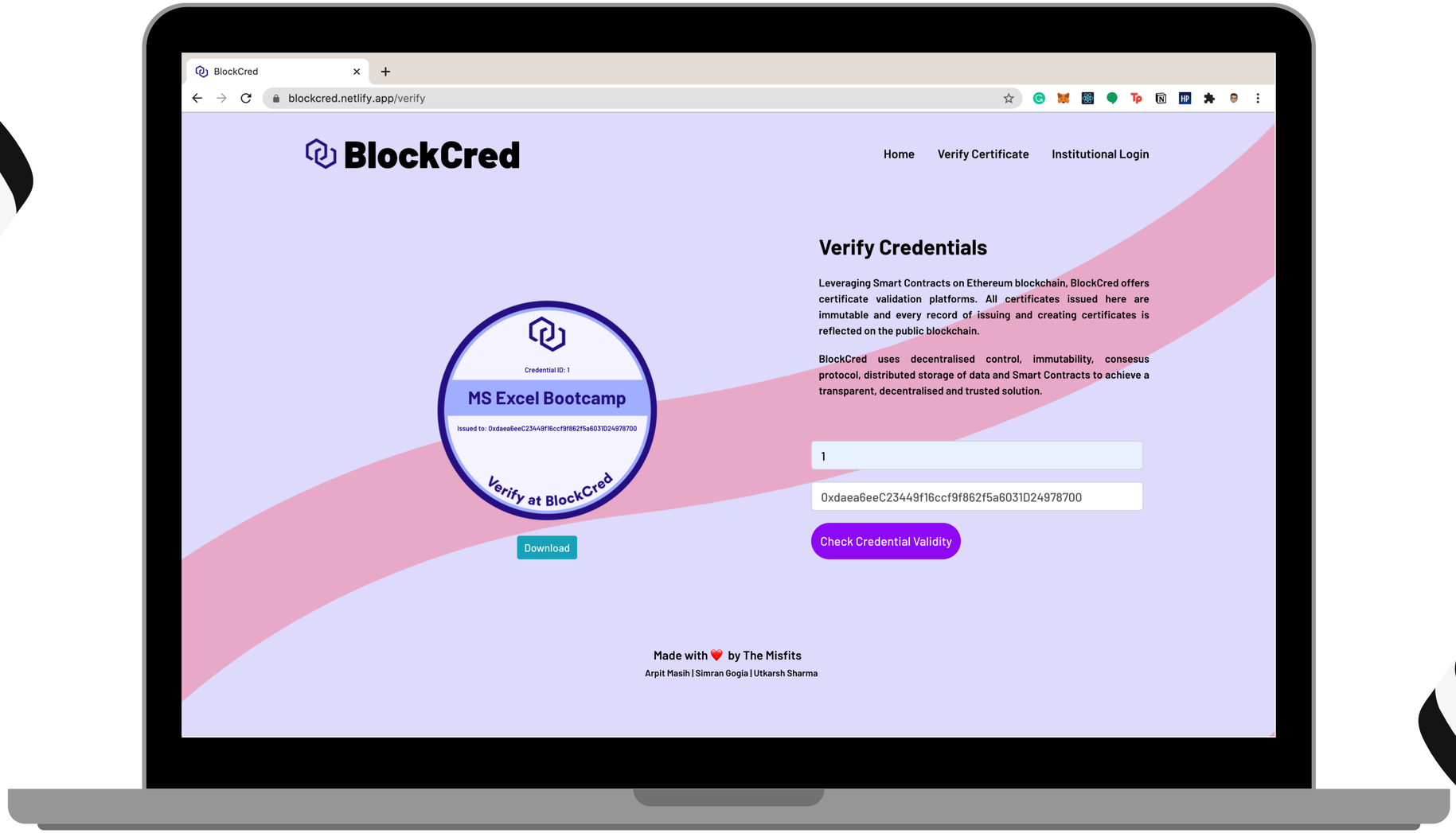
Truffle and Solidity

Infura Node

APP FUNCTIONALITY

1. Institutions
2. Student
3. Verifiers





Verification of credentials with a downloadable badge

TM

FEATURES

Our solution caters to the needs of both ends of the spectrum, and puts forth the following features and functionalities

Security and Decentralised Control

- One-touch login using Blockchain wallets like Metamask to ensure for an authenticated bunch of users.
- Secure and hassle-free financial transactions on Ethereum blockchain.

Transparency

- Complete transparency in an institution’s issuing record to counter bias.
- Public ledger for credential attestation and using them as skill identifiers on other platforms.

Scalability

- Faultless verification of credentials issued on the platform
- A suggestion contraption on the end of the issuing authorities to link them up with possible candidates based on their records

UNIQUE SELLING PROPOSITION

Transactions within the credential system

This gives the learner an easy and versatile platform to pay for the credentials they receive at the end of their learning pathway and the issuing authority can accept payments in a diverse range of cryptocurrencies, allowing them to reach a global audience and counter high fees associated with third-party providers and Credit Cards.

Smart contracts

This structure allows only institutions to approve requests and collect the associated amount in their wallets. Ethereum blockchain allows this hack-proof solution.

Immutability

Once issued, Certificates can’t be revoked or edited, guaranteeing life-long validity for the recipients.
All new certificates, approvals and requests are sent through the Ethereum Consensus Mechanisms, allowing for full transparency and decentralised control.

FUTURE SCOPE

1 Tech Extension

Extending React Web Application to native Mobile Applications using libraries like *web3swift* and *web3dart*

2 Optimization

A wallet of our own will be used for both transactions and authentication which will reduce dependency on external wallets like Metamask.

3 Business Relevance

The platform can create an ERC20 token in its name and do an ICO, offering an easy pathway for the users to pay for their learning and earn revenue for the platform as a whole. This would facilitate us into making our solution a completely free service for the issuing authorities.