Blockchain Hackathon Pitch Deck

Team SmartContract
Jan 2023

Table of contents

Our team

Shagun

- Problem Identifier
- Product Owner
- 15 years of HR exp.
- Mother of 2 year old

Rochak

- Tech Enthusiast and Blockchain Developer
- Product Tech Manager
- 15 years of Tech exp.

01

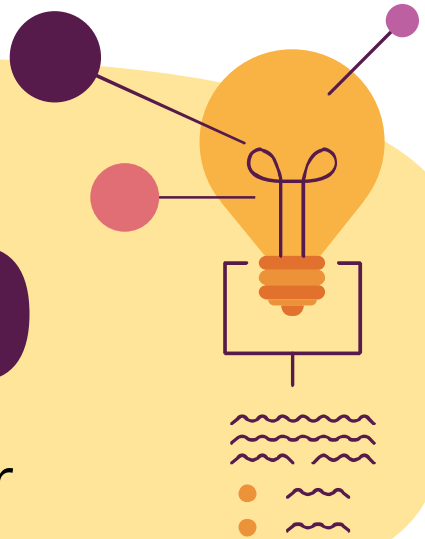
Problem vs. Solution

“There’s nothing worse than seeing a person willing to work and not being able to start ”

—SOMEONE FAMOUS

18,000,000

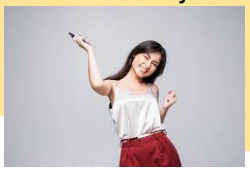
Hours lost annually in waiting for background verification



Gartner Research 2021

Existing Background Verification for hires

Venus is excited to start a new job



Venus sends all her documents (passport, certificates) to company's HR or agency doing verification

Company starts background verification process

6-8 weeks elapses in verification

Venus and her hiring company wait anxiously

Verification either completes or goes into enhanced due diligence adding further time

Process repeats for every new job Venus applies

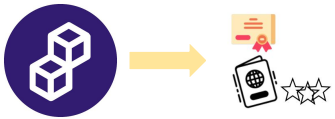
Problem Statement	Faced by Job Seeker	Faced By Hiring Company
Lost productivity during waiting period (6-8 weeks) for validation of candidate records.	✓	✓
Demotivates candidates, adding to transition anxiety during waiting.	✓	
Risk of candidate deflecting to other job openings during waiting period		✓
Verification Process is expensive, esp. as third parties are engaged for verification. Also admin heavy.		✓
Risk of incomplete background verification. No four eye check.		✓
Verification has repeated for every job offer of the candidate or position	✓	✓

Solution

- ➔ Candidate's documents are stored on the public blockchain
- ➔ Documents are assigned an initial base credibility score

- ➔ Document's credibility score increases* each time a background check is performed

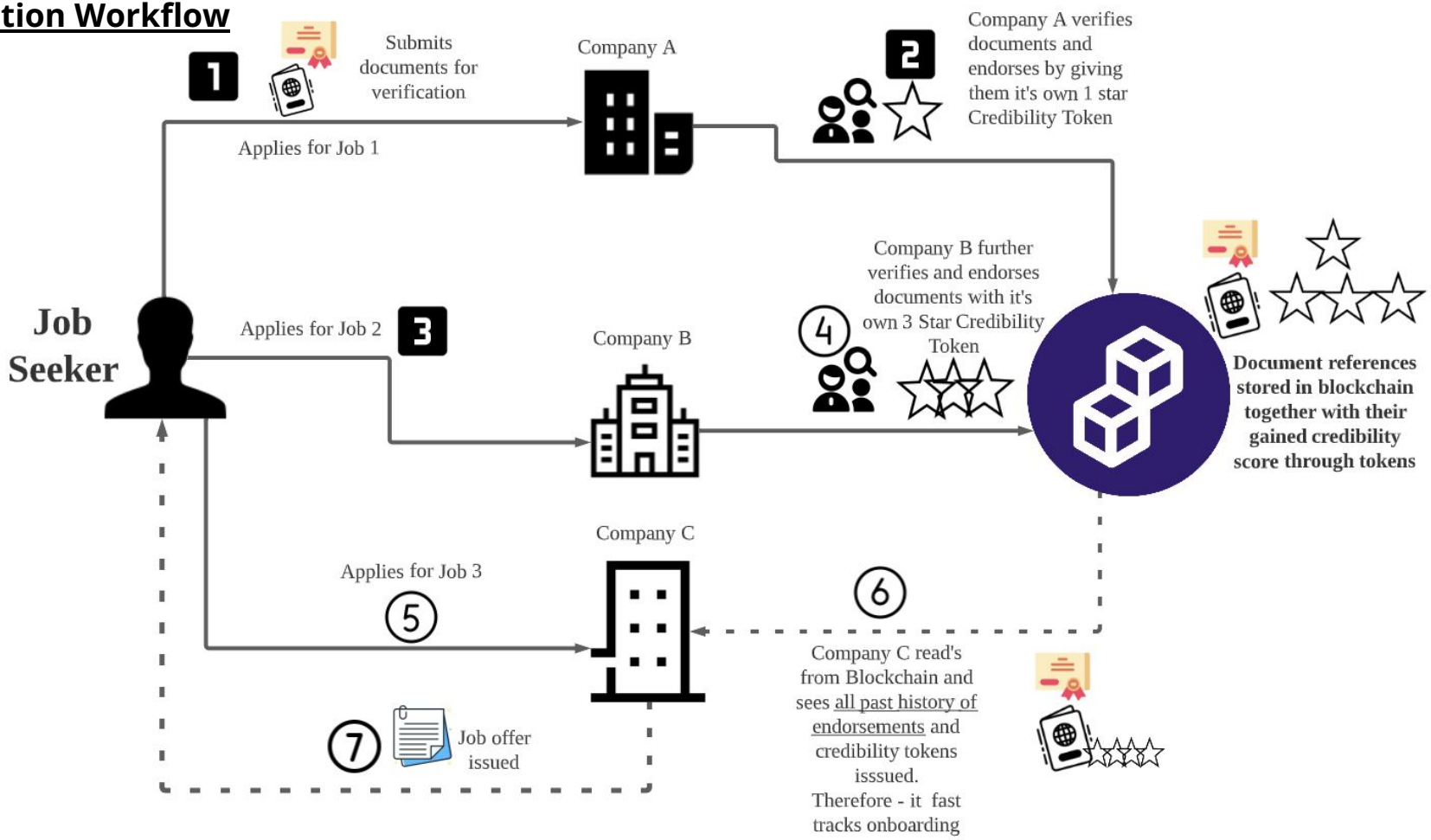
- ➔ A hiring company can access their candidate's records from the blockchain. The records show the history of all background verifications and document's credibility score.



- ➔ The hiring company decides to **fast track onboarding** without another background verification. This speeds up onboarding for all.

* Credibility score is assigned in proportion to the credibility tokens in possession of the endorsing company.
* Credibility tokens can be earned and traded as a cryptocurrency on the blockchain. Optional to use.

Solution Workflow



Advantages	Seen by Job Seeker	Seen by Hiring Company
Less administration. Candidates have to send their document records less frequently. Public key of those records can be given for subsequent access.	✓	✓
Reduced risk with use of credibility score. Hiring companies can benefit from past verifications and 4 eye checks	✓	✓
Faster onboarding of candidates - improves productivity and lessens anxiety	✓	✓
Cost savings - eliminates need to engage a third-party for background verification		✓
Enhances brand positioning and market status through use of publicly tradable Credibility Tokens (cryptocurrency)		✓

What have we built?

- A working demonstration of **two smart contracts** on Ethereum

- **One Smart Contract** to track Document records
  - Document records are stored on Ethereum. These records can be candidate's passport, certificates, financial records etc.
  - Blockchain was chosen as database to get in-built platform benefits of record immutability and record tracking.
  - Participant performs below roles on Ethereum Blockchain -
    - **Issuers** - owner of the document records (usually job seeker)
    - **Endorsers** - companies who have independently verified document records and given their credibility score
    - **Validators** - companies accessing these document records to directly hire a candidate. Smart contract will provide validators a full view of historical verifications and credibility score of documents

What have we built?

- **Second Smart Contract** to build a **ERC 20 token** standard crypto currency - called **Credibility Token** (short name- CredTokens)

    - Initial amount of 50000 cred tokens in circulation
    - Ability for participants to use cryptocurrency (own and transfer)
    - Functionality to add credibility points to document records in proportion to participant's token balances.

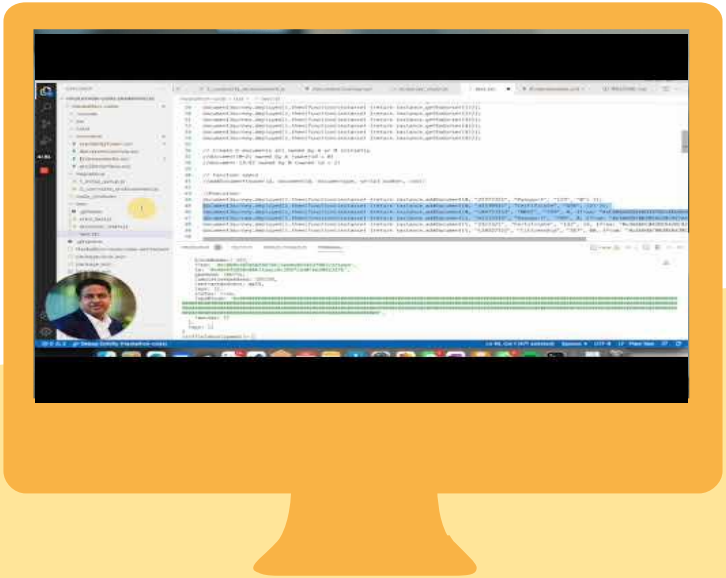
- **Proof of concept UI screen** to invoke smart contract functionality [partially]

What is the technology we have used?

- Blockchain - **Ethereum**.
- Smart Contract Programming language - **Solidity**
- Development Platform
  - Blockchain Client - **Geth**
  - Development Framework - **Truffle**
  - Development Blockchain - **Ganache**
  - Public Test Blockchain - **Goerli**
  - Public Node Cluster on Ethereum - **Infuse**
  - Source Code Editor - **Visual Studio** on Mac + Solidity
    - Extension

- Crypto Wallet to store ETH - **MetaMask**
- Front End UI using **React JS** using **Web3** library to invoke smart functions

Product Screenshot demo



YouTube Link: https://youtu.be/iO7MGvLzjVo

What is yet to be done?

- Customer friendly user interface (GUI)
  - Development of full fledged web apps, mobile apps with QR code functionality
  - Further extend decision logic in awarding credibility score
  - Extend existing proof of concept in ReactJS, to invoke our smart contracts from the public test blockchain

- Define operational processes with company HR to get full set of requirements
- Build product features as per roadmap in line with new requirements
- Deploy dApp to to public blockchain.

Thank you

Appendix

Screenshots of Smart Contracts

Screenshots – Smart Contracts Deployed

PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL zsh

```
Compiling your contracts...
===========================
> Everything is up to date, there is nothing to compile.


Starting migrations...
======================
> Replacing 'DocumentJourney'
   ----------------------------
   > transaction hash:    0xb4f5cc44bcf1c58e643127f2ed70599680988955f7dcd06404c0f4169cde3339
   > Blocks: 0            Seconds: 0
   > contract address:    0x103136CaD300B1fe978a02768bF007A684d19d68
   > block number:        341
   > block timestamp:     1673186936
   > account:             0xC8804485bb0D5876614Eb0e8B44A3F082C9cbaeD
   > balance:             95.09306584
   > gas used:            3867532 (0x3b038c)
   > gas price:           20 gwei
   > value sent:          0 ETH
   > total cost:          0.07735064 ETH

   > Saving artifacts
   -------------------------------------
   > Total cost:          0.09565996 ETH

Summary
=======
> Total deployments:   3
> Final cost:          0.10016446 ETH
```