

Blockchain Visualizer Using Blockchain

Jyotsana Srivastava¹, Alka Singh², Dr. Avinash Gupta³, Preeti Singh⁴, Atishek Singh⁵, Akshat Rastogi⁶

^{1,5,6}Student, Babu Banarasi Das Engineering College, Lucknow, Uttar Pradesh

³Professor and Head, Babu Banarasi Das Engineering College, Lucknow, Uttar Pradesh

^{2,4}Assistant Professor, Babu Banarasi Das Engineering College, Lucknow, Uttar Pradesh

Submitted: 20-05-2022

Revised: 28-05-2022

Accepted: 30-05-2022

ABSTRACT: Blockchain Visualizer is basically an approach that started as a way for the general public to give modest visualization of blockchain to the people. The aim of this article is to suggest the use of blockchain technology. With which we can basically provide the safe, secure, T & transparent Knowledgeable platform. This paper's goal is to build interactive platform as in the Blockchain concept has already received considerable attention in particular to the variety of domains as in example Cryptocurrency. [1]

It supports the Bitcoin currency Ecosystem. Because it is a distributed system, every node in the decentralised network stores all of the records. Blockchain Visualizer makes it simple in many ways. The issue with today's generation is that they have very less exposure in this new technology, fraud does occur sometimes. Avoiding these issues can be as simple as using a blockchain-based Visualizer. [3]

Our project's goal is to develop an independent application that will allow every fresh concept to come to reality. We created a Visualization platform that is built on the blockchain. In this application, we give an easy-to-use interface for anyone to visualise data in blockchain manner.

I. INTRODUCTION

The blockchain is a decentralised system initially developed as a distributed & digital ledger system that keeps track of all transactions and visualizes their data in a few sorts of minutes, & not only this application was beneficial for visualizing the data but also helpful in making people understand about the Blockchain Technology.

II. BLOCKCHAIN

A blockchain is basically a distributed ledger system that enables the third party that doesn't fully trust each other to do the transactions. It was transparent, so that other parties could rely

on it and developers can take the advantage from its transparency, including visualizing the transactions and transfers that happen in real-time.

This is a very basic visual introduction to the concepts behind a blockchain.[4] We introduce the idea of an immutable ledger using an interactive web demo.

Blockchain Visualization Platform

We have created a visual demo of blockchain technology which attempts to explain the technology by building up from simple Java-script.

Blockchain Demo

A live blockchain visualizer demo in a browser.

III. HASH

It is a digital fingerprint of the data that is written, the length of the hash is fixed no matter what information is stored.

SHA256 Hash



IV. BLOCK

The hash module present includes the Block, Nonce, & W Data.

Also we see that whenever data is empty it has some of the particular hash.

Hash

0000f727854b50bb95c054b39c1fe5c92e5ebcfa4bc
b5dc279f56aa96a365e5a



If in case the Block #4 would be mined, then a Nonce will be found and it would validate the current Block but not the next one on the chain.



If in case the Block #5 is mined, then it would validate it by matching the hash of the previous block in it.



VI. DISTRIBUTED BLOCKCHAIN

Now, as we know there could be a distributed chain of blocks with some peers with the identical blocks.



If in particular any change is made in Block #4 of the Peer B, it will eventually affect the particular Block, but won't affect the other blocks nor affect the peers.



If Block #4 and Block #5 are mined, both blocks will be valid then the whole chain will be ok. As the Resultant the hash in Block #5 in Peer B would not be the same as Block #5 in Peer A or in Peer C.





By even having the distributed blockchain as a change in the past can be noted and it could be traced by examining the blocks.

VII. TOKENS

In Tokens if the relevant information were to be stored, for example The list of transactions like the ones below we can say, it could be relevant to keep track of them and know if at a certain point a change has been made or not that breaks the chain. This is called making the Token on a blockchain.



A change was made in the blockchain. This is known as the point of keeping track of stuff that happens in the past by using a blockchain to remember the tokens.



But up to this point we could say that, the system that does not know if Darcy has some particular amount of something or not, the only thing that is known is that D has made a transaction to the B.

VIII. COINBASE TRANSACTIONS

Now the coinbase transaction would be added to the blocks. Basically the initial amount is been registered to A in Block #1 and then a couple of transactions have been made to the blockchain.



The block could be examined to check whether the person has the amount to give it to another one, since it can be traced by the hash (and even by the peers) if something is weird and does not match it.



IX. CONCLUSION

Knowledge of the fundamentals is the initial way to obtain the necessary understanding of how projects can benefit from the use of blockchain.

Blockchain is basically a promising technology that would change the way we make electronic exchanges and even maintain the integrity of data in untrusted and decentralized systems. We also even provide the visualization of blockchain visualization in the landscape that is still rapidly changing, with new applications appearing regularly and existing blockchains changing the protocols and the structures.

REFERENCES

- [1]. Anders Brownworth video lecture 'Blockchain 101 - A Visual Demo This is a very basic visual introduction to the concepts behind a blockchain. We basically introduce the idea of an immutable ledger while using an interactive web demo.(2016)
- [2]. S. Bistarelli and F. Santini, "Go with the-bitcoin-flow, with visual analytics," in Proc. Conference on Availability, Reliability and Security, ACM, 2017, p. 38. DOI: 10.1145/3098954.3098972.
- [3]. A. Bogner, "Seeing is understanding: Anomaly detection in blockchains with visualized features," in Proc. Joint Conference basically on the Pervasive and



- Ubiquitous Computing and Symposium on Wearable Computers (UbiComp/ISWC), ACM,2017,pp.5–8.DOI: 10.1145/3123024.3123157.
- [5]. S. Chawathe, “Monitoring blockchains with self-organizing maps,” in Proc. Conference on Trust, Security and Privacy In Computing and Communications.