



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

IJRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 11, Issue 5, May 2022

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 8.118

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Online E-Voting System Using Blockchain Technology

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ABSTRACT: With around a million voters and 500 constituencies in the House, India is the biggest democracy in the world. India has a population of over one billion people. The vote serves as a link between parliament and the executive branch of government. In recent years, the technology used in the voting process has been revitalised. There are several safety gaps in the new voting system and simple safety features are difficult to prove. There are several questions in a voting system that can prove correct. There are grounds to maximise participation in voting by an electronic machine government and cut election expenses. Electronic voting devices are still operational in all respects, and it is not possible, by using an electronic voting unit, to authentically recognise or protect the voter against the wrongdoers. In order to improve privacy and transparency for users, the proposed architecture could build a compliant High Security voting system using blockchain technologies.

KEYWORDS: Electronic Voting System, Voter ID, Security, Block Chain, Vote.

I. INTRODUCTION

Modern societies are based on ballots or electronic votes (e-voting). In recent years, voter apathy has increased, particularly among the younger generations of computers and technology. E-voting is promoted as a future alternative for young people. For a robust electronic voting system, a number of practical and security requirements are identified including transparency, accuracy, auditability, systems, and data integrity, confidentiality, availability, and delivery of authority. Block chain technology supports a distributed network of several interconnected nodes. Each node has a separate copy of the distributed directory that contains the whole history of all network transactions. There is no single authority regulating the network. If the majority of nodes consent, they approve the contract. This network will keep users anonymous. A fundamental study of block-chain technologies demonstrates that e-voting should be carried out appropriately and e-voting can be acceptable and efficient.

II. RELATED WORK

This paper[1] proposes a consistent method of voting with rapid votes via a biometric voting system based on RFID. There are two authentication actions in this manual. The data in LPC 2148 are contained first of all with an RFID tag. The second is to verify whether RFID belongs to the user with a fingerprint scanner or not. Based on the RFID protocol the disadvantage of this paper is maximized.

This paper uses a UIDAI QR code[2] card issued by Aadhaar. Install voting data on a stable server instead of an offline mode online. After you enter your user id and password, the findings will be seen by the admin.

This [3] method is a smart voting technology that enables all INDIA voters from their nearest polling stations to vote for INDIA. The procedure is a fingerprint identification technology. Create a secure, smart biometric voting infrastructure. Provides a secure voting process in the suburban constituencies for voters from all parts of India from the nearest polling station without neglecting to vote.

This paper [4] proposes a system of secure voting that prohibits fraud. Biometrics are used to authenticate a person and validate the elector's ability. The details in the Aadhaar card are the main authentication and conformation criteria. Biometrics such as fingerprint are provided for protection. As a guide you can authenticate the data in the Aadhaar fingerprint at voting time.



The standard machine [5] now used is automatically checked with delays, such as multiple ballot castings by a single member and voting invalidity. The intelligent and fingerprints are automatically analyzed to eliminate these disadvantages by casting a mere number of votes.

The feasibilities of a publicly available crypto-system E-Voting Protocol were seen in this paper [6]. The security of the proposed e-voting is based on the public encryption RSA protocol. It allows the voter to vote on a mobile computer without any extra costs and commitments (PC). This is implemented to replace the previously inefficient electoral system, since voters are guaranteed to count their ballots.

This system [7] provides some form of defense from threats, because polling from voting customers to voting servers takes place. The attacks include passive as well as active safety risks for intruders. When we use the logo or image of the elector's face to match photos stored in our files, it's better to authenticate electors rather than USERNAME.

This paper uses a block-chain voting system[8]. It takes time to popularize block chains in a voting system because it is a new idea, and voting for yourself is a critical question in a democratic environment.

The proposed model [9] is secure than other models and can be used in major elections on a wide scale. Once the NCVVS system has been voted on, a confirmatory federprint email will be sent to voters that is established by the standard SHA feature (including referendum fingerprint) (256).

The suggested work [10] is based on an architecture for block chains which eliminates all risks from communication. It is a decentralized architecture that includes a hacking and encryption security concept

III. EXISTING SYSTEM

Thanks to its extensive use and applications, a lot of work has been done in this area. Some of the approaches implemented for the same purpose are discussed in this section. These works are distinguished mainly from the E - voting system algorithm.

The current machine had safety hazards that may undermine the electoral process. As well as human error, Internet e-voting is subject to a range of threats such as domestic and international saboteurs hacking, technical failures, electoral impersonation and even system failures.

IV. PROPOSED APPROACH

In our system Block Chain Concepts are applied to Online Voting System when we are developing a Smart E-voting system by taking advantage of block Chain concepts with web interface.

V. CONCLUSION

This paper describes an electronic voting system which offers secrecy, authentication, auditability, security, double voting prevention and a judiciary system by authenticating voting options for online voters and systems of public opinion.

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SJIF Scientific Journal Impact Factor
Impact Factor: 8.118



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