Survey Paper on E-Voting System using Blockchain

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Abstract -To develop an E-voting system in order to achieve privacy, security, transparency by replacing the traditional e-voting system has the potential to minimize the fraud voting. The system will increase convenience for voters. It will make very easy for people with disabilities or who have trouble moving around to vote. It is very quick and private way to vote. This will increase the number of voters since the process does not take up too much of their time of the day. It will help to increase the trust of the people in the government since it is more transparent than the current system. To explore the design of currently available voting protocols, the entities involved in the election, the features they contain, and how secure they are. To examine and understand how block chain technology works as a distributed append- only ledger and show how this aspect of the block chain makes it suitable for electronic voting. To determine the best front-end languages to build this project. To run a comparison of different available technologies that are suited for back-end security work, a database, and a block chain ledger.

Keywords- Blockchain, ECDSA, e-voting System.

I. INTRODUCTION

Building a secure electronic voting system that offers the fairness and privacy of current voting schemes, while providing the transparency and flexibility offered by electronic systems has been a challenge for a long time. In this work-in-progress paper, we evaluate an application of blockchain as a service to implement distributed electronic voting systems. The paper proposes a novel electronic voting system based on blockchain that addresses some of the limitations in existing systems and evaluates some of the popular blockchain frameworks for the purpose of constructing a blockchain-based e-voting system. In particular, we evaluate the potential of distributed ledger technologies through the description of a case study; namely, the process of an election, and the implementation of a blockchain-based application, which improves the security and decreases the cost of hosting a nationwide election.
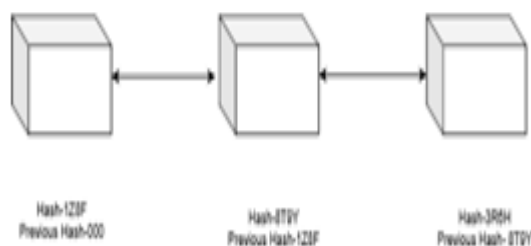

Fig. 1 Block Chain Process.

II. LITERATURE REVIEW

There are lot of practices are made to introduce the variations in electronic and online voting systems wheredifferent techniques and methodologies are used. Some of them guarantees the confidentiality and security to the system at some extent, still the voting information and process need to be control and manage with advanced systems that will ensures and guarantees the security and privacy of voter's and voter's information.

Table 1 Literature Survey

Paper Name	Introduced Year	Seed Idea	Model Used	Drawbacks
Bronco Vote: Secure Voting System using Ethereum's Blockch ain.	January-2018	User Credential ,Email verification are used for implementi ng the E-voting System.	Block chain	Anyone can log as user email and access its credentials
Crypto-Voting, a blockch ain based e-voting	January-2018	Using the crypto voting ,biometrics Fingerprint are used for implementi ng the E-	Cryptogra phy using Block chain	Security inefficiency

system.		voting System.		
Smart Voting System support through Face Recogni tion .	April-2018	Used Face Recognition are used for implementi ng the E-voting System.	Face Recognitio n	Not implementin g block chain
Blockc h ain based E-voting System.	July-2018	Password based system they are used	block chain used	Anyone can use users credentials

III. PROPOSE SYSTEM

This research proposed a database recording system on e-voting using block chain technology. This method aims to maintain data integrity, which is protected from manipulations that should not happen in the election process. And use face detection and QR code scanner module for Authentication. And Develop a secure electronic voting system.
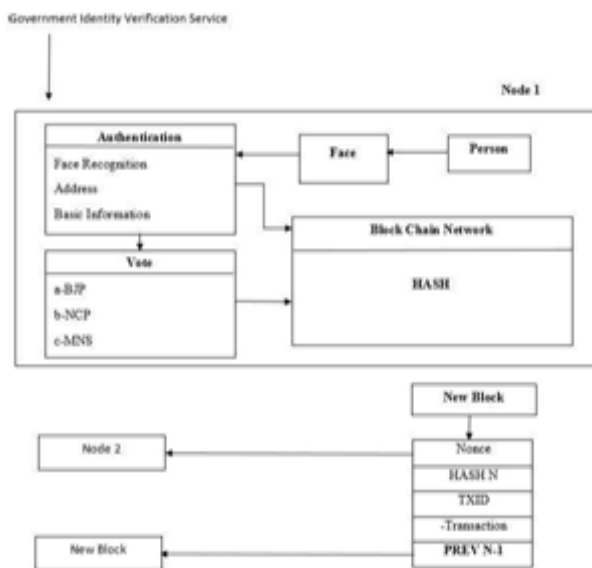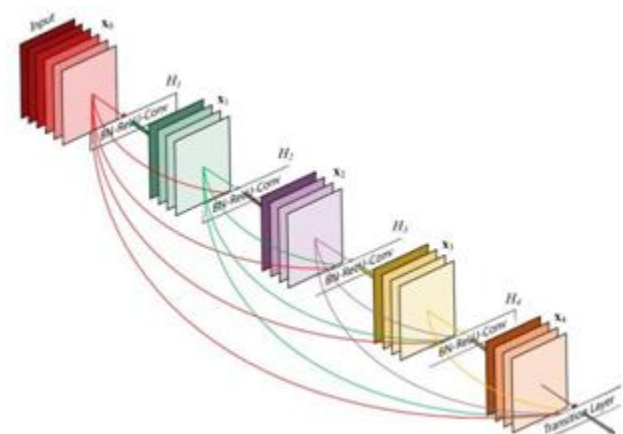

Fig. 2 Propose System.

Fig. 3 Convolutional Neural Network (CNN)

ResNet
In Lopez et al, it proposes to use the pretrained Convolutional networks models. The Fully connected layers is attached to the VGG16 model. This attached layers needs to be trained. Using pretrained models like VGG16 allows us to prepare the model without much need of computational power [4].In Mendes et al. published in 2017, uses ResNet152 pretrained model to make the classifier. Because of the Data Augmentation, the model is trained on wide variety of features, which makes the model resistant to overfitting. In this paper, the author faces the need to test the model on wide variety of data with more diversity [5].

V. ECDSA ALGORITH

Public-key cryptography algorithms, especially elliptic curve cryptography (ECC) and elliptic curve digital signature algorithm (ECDSA) have been attracting attention from many researchers in different institutions because these algorithms provide security and high performance when being used in many areas such as electronic-healthcare, electronic-banking, electronic-commerce, electronic-vehicular, and electronic-governance. These algorithms heighten security against various attacks and the same time improve performance to obtain efficiencies (time, memory, reduced computation complexity, and energy saving) in an environment of constrained source and large systems. This paper presents detailed and a comprehensive survey of an update of the ECDSA algorithm in terms of performance, security, and applications.

VI. CONCLUSION

In this paper, we have discussed various strategies for the identification and classification of face recognition like convolutional neural network, transfer learning,ECDSA etc. We have also discussed the basic concept of E-Voting System and minimize the fraud voting

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