

Online Ballot Voting System

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Abstract:

Electronic Voting is the same old way of undertaking elections with the use of Electronic Voting Machines. In India, the vote casting device commonly makes use of the guide technique in which electorate queue up in a bodily area to solid their votes for his or her picks.This project generally focuses to offer the human beings an real clinical network with events' coverage positions, with appreciate to their constituencies. A internet utility is evolved with the use of reactJS that ambitions to investigate the function of the prevailing political events/independents who're contesting withinside the impending kingdom election. This internet utility additionally allows the kingdom authorities in attaining a 100% vote casting price withinside the kingdom elections with the aid of using supplying an e-vote casting device allowing Face Detection authentication.

Keywords — **Face recognition,Face detection,Accuracy.**

1.INTRODUCTION

India is a rustic country divided into states and union territories, with a parliamentary device ruled below the Constitution of India, which defines the energy distribution some of the federal authorities and the states. The Election Commission of India is an independent constitutional authority chargeable for administering Union and State election approaches in India. The frame administers elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies in India, and the places of work of the President and Vice President withinside the country. India is a sovereign, socialist, secular, democratic republic. Democracy runs like a golden thread withinside the social, financial and political cloth woven with the aid of using the Constitution given with the aid of using 'We, the People of India' unto ourselves. The idea of democracy as visualised with the aid of using the

Constitution pre-supposes the illustration of the human beings in Parliament and State legislatures with the aid of using the technique of election. The Supreme Court has held that democracy is one of the inalienable fundamental capabilities of the Constitution of India and bureaucracy a part of its fundamental structure. The Constitution of India followed a Parliamentary shape of authorities. Parliament includes the President of India and the 2 Houses — Rajya Sabha and Lok Sabha. India, being a Union of states, has separate kingdom legislatures for every kingdom. State legislatures include the Governor and Houses Legislative Council and Legislative Assembly in seven states, namely, Andhra Pradesh, Telangana, Bihar, Jammu & Kashmir, Karnataka, Maharashtra and Uttar Pradesh, and of the Governor and the kingdom Legislative Assembly withinside the ultimate 22 states. Apart from the above, out of the seven Union Territories, namely, National Capital

Territory of Delhi and Puducherry, additionally have their Legislative Assemblies.

RELATED WORKS

**Huilin Li, Yannan Li, Student Member, IEEE, Yong Yu, Member, IEEE, Baocang Wang, Kefei Chen,"Huilin Li, Yannan Li, Student Member, IEEE, Yong Yu, Member, IEEE, Baocang Wang, Kefei Chen".[2020] **

Artificial intelligence (AI) has confirmed large ability in lots of actual-international packages. However, a few full-size concerns like fairness, transparency and trustworthiness are nonetheless tough whilst making use of AI to trust-orientated packages consisting of E-vote casting. E-vote casting performs a full-size function in democratic societies, which calls for electorate and initiators have robust mutual trust. In this paper, we goal to facilitate the consolidation of AI ecosystems with the aid of using growing a blockchain-primarily based totally traceable self-tallying e-vote casting device. We take gain of an event-orientated linkable institution signature and a homomorphic time-lock puzzle to stability the anonymity and accountability, and the vote casting scale and performance of an e-vote casting device. The proposed e-vote casting protocol helps extra capabilities like multi-desire and self-tallying. We show that the proposed protocol satisfies anonymity, time-bounded privacy, linkability and full-traceability. We additionally examine the time price of off-chain operations and the fueloline price of on-chain operations, which display the proposed e-vote casting protocol is realistic and may be followed in actual-international packages.

SaberSalehkaleybar, Member, IEEE, Arsalan Sharif-Nassab, and S. JamaloddinGolestani, Fellow, IEEE Dept. of Electrical Engineering, Sharif University of Technology, Tehran, Iran,"Distributed Voting/Ranking with Optimal Number of States in keeping with Node"

Considering a community with n nodes, in which every node first of all votes for one (or extra) picks out of K viable picks, we gift a Distributed Multi-

desire Voting/Ranking (DMVR) set of rules to decide both the selection with most vote (the vote casting trouble) or to rank all of the picks in phrases in their obtained votes (the rating trouble). The set of rules consolidates node votes throughout the community with the aid of using updating the states of interacting nodes the use of key operations; the union and the intersection. The proposed set of rules is simple, unbiased from community length, and effortlessly scalable in phrases of the range of picks K , the use of simplest $K \times 2^{K-1}$ nodal states for vote casting, and $K \times K!$ nodal states for rating. We show the range of states to be most beneficial withinside the rating case; this optimality is conjectured to additionally practice to the vote casting case. The time complexity of the set of rules is analyzed in whole graphs. We display that the time complexity for each rating and vote casting is $O(\log(n))$ for given vote percentages, and is inversely proportional to the minimal of the vote percent variations amongst diverse picks.

Luis Panizo, Mila Gascó, David Y. Marcos del Blanco, José A. Hermida, Jordi Barrat and Héctor Aláiz," E-vote casting device assessment primarily based totally at the Council of Europe recommendations: Helios Voting"

Despite the claimed advantages of e-vote casting initiatives, wider adoption of e-vote casting mechanisms and implementation approaches is slower than expected. Several technical, social, and cultural demanding situations prevent generability and applicability of e-vote casting. Amongst them, the assessment and harmonization of e-vote casting structures, given exceptional prison and statutory frameworks, remains an critical task to overcome. Yet, just a few works have addressed this subject matter withinside the field. This article ambitions to make contributions to in addition information this unexplored subject matter with the aid of using making use of a realistic assessment framework to Helios Voting, one of the maximum extensively used e-vote casting equipment to date. Our framework, strongly primarily based totally at the technical and safety necessities issued with the aid of using the Council of Europe in 2017, is a

precious supply of data for election officials, researchers and electorate to apprehend the strengths and weaknesses of Helios Voting and, as a result, to enhance decision-making approaches concerning the kind and length of elections that may be securely treated with the aid of using Helios Voting. The closing purpose of our paper is to conceptually and nearly aid the gradual, steady and protocolized growth of e-vote casting.

Nirnimesh Ghose, Bocan Hu, Yan Zhang, and Loukas Lazos, "Secure Physical Layer Voting" ; Somnath Panja , Samiran Bag , Feng Ha, and Bimal Roy, "A Smart Contract System for Decentralized Borda Count Voting"

Distributed wi-fi networks regularly appoint vote casting to carry out crucial community capabilities consisting of fault-tolerant statistics fusion, cooperative sensing, and attaining consensus. Voting is applied with the aid of using sending messages to a fusion middle or through direct message alternate among members. However, the put off overhead of message-primarily based totally vote casting may be prohibitive whilst severa members should proportion the wi-fi channel in sequence, making it impractical for time-crucial packages. In this paper, we endorse a quick PHY-layer vote casting scheme referred to as PHYVOS, which notably reduces the put off for gathering and tallying votes. In PHYVOS, wi-fi gadgets transmit their votes concurrently with the aid of using exploiting the subcarrier orthogonality of OFDM and with out specific messaging. Votes are found out with the aid of using injecting strength to pre-assigned subcarriers. We display that PHYVOS is steady towards adversaries that try and manipu-past due the vote casting outcome. Security is carried out with out using cryptography-primarily based totally authentication and message integrity schemes. We analytically examine the vote casting robustness as a feature of PHY-layer parameters. We expand PHYVOS to function in advert hoc groups, with out the help of a fusion middle. We talk realistic implementation demanding situations associated with multi-tool frequency and time synchronization and gift a prototype

implementation of PHYVOS at the USRP platform. We supplement the implementation with large scale simulations.

Christian Galea, Student Member, IEEE, and Reuben A. Farrugia, Member, IEEE "Matching Software-Generated Sketches to Face Photos with a Very Deep CNN, Morphed Faces, and Transfer Learning" IEEE transactions on data forensics and safety, 2017.

Sketches received from eyewitness descriptions of criminals have established to be beneficial in apprehending criminals, in particular whilst there's a loss of evidence. A very deep convolutional neural community is applied to decide the identification of a topic in a composite comic strip with the aid of using evaluating it to stand pix, and is skilled with the aid of using making use of switch mastering to a kingdom of-the-artwork version pre-skilled for face image popularity. three-D morphable version is used to synthesis each pix and sketches to enhance the to be had schooling statistics, an technique this is proven to noticeably resource overall performance, and the UoM-SGFS database is prolonged to include two times the range of subjects, now having 1200 sketches of six hundred subjects. An tremendous assessment of famous and present day algorithms is likewise done because of the shortage of such data in literature, in which it's miles confirmed that the proposed technique comprehensively outperforms present day strategies on all publicly to be had composite comic strip datasets.

Wasserstein CNN: Learning Invariant Features for NIR-VIS Face Recognition.

Extensive experiments the use of 3 tough NIR-VIS face popularity databases display the prevalence of the WCNN technique over present day strategies. The novel Wasserstein convolutional neural community (WCNN) technique for mastering invariant capabilities among near-infrared (NIR) and visual (VIS) face snap shots (i.e., NIR-VIS face popularity). The low-degree layers of the WCNN are skilled with extensively to be had face snap

shots within the VIS spectrum, and the excessive-degree layer is split into 3 parts: the NIR layer, the VIS layer and the NIR-VIS shared layer. The first layers goal at mastering modality-particular capabilities, and the NIR-VIS shared layer is designed to analyze a modality-invariant function subspace. The Wasserstein distance is delivered into the NIR-VIS shared layer to degree the dissimilarity among heterogeneous function distributions. W-CNN mastering is done to limit the Wasserstein distance among the NIR distribution and the VIS distribution for invariant deep function representations of heterogeneous face snapshots. To keep away from the over-becoming trouble on small-scale heterogeneous face statistics, a correlation previous is delivered at the fully-linked WCNN layers to lessen the dimensions of the parameter area. This previous is applied with the aid of using a low-rank constraint in an quit-to-quit community. The joint method results in an alternating minimization for deep function illustration on the schooling level and an green computation for heterogeneous statistics on the checking out level.

Jiaojiao Zhao, Jungong Han, and Ling Shao, Senior Member IEEE, “Unconstrained Face Recognition Using A Set-to-Set Distance Measure on Deep Learned Features” Citation data: DOI 10.1109/TCSVT.2017.2710120, IEEE Transactions on Circuits and Systems for Video Technology IEEE transactions on circuits and structures for video technology.

A novel Set-to-Set (S2S) distance degree to calculate the similarity among units with the goal to enhance the accuracy of face popularity in actual-international conditions consisting of excessive poses or extreme illumination conditions. Our S2S distance adopts the CNN-common pooling for the similarity ratings computed on all of the media in units, making the identity some distance much less liable to the terrible representations (outliers) than conventional function-common pooling and score-common pooling. Furthermore, we display that diverse metrics may be embedded into our S2S distance framework, such as each

predefined and discovered ones. This permits to pick the precise metric relying on the popularity project with a view to attain the high-quality outcomes. To examine the proposed S2S distance, we behavior tremendous experiments at the tough set-primarily based totally IJB-A face dataset, which display that our set of rules achieves the kingdom of-the-artwork outcomes a dis really advanced to the bottom traces such as numerous deep mastering primarily based totally face popularity algorithms.

Jiwen Lu, Gang Wang, Weihong Deng, and Jie Zhou,” Simultaneous Feature and Dictionary Learning for Image Set Based Face Recognition” Citation data: DOI 10.1109/TIP.2017.2713940, IEEE Transactions on Image Processing.

A SFDL technique to analyze discriminative capabilities and dictionaries concurrently from uncooked face pixels in order that discriminative data from facial picturegraph units may be mutually exploited with the aid of using a one-level mastering procedure. To higher make the most the nonlinearity of face samples from exceptional picturegraph units, we endorse a deep SFDL (D-SFDL) technique with the aid of using mutually mastering hierarchical non-linear differences and class-particular dictionaries to in addition enhance the popularity overall performance. Extensive experimental outcomes on 5 extensively used face datasets really display that our SFDL and D-SFDL attain very aggressive or maybe higher overall performance with the kingdom-of-the-arts.

TECHNOLOGIES USED

A. Deep Learning

Deep mastering is a pc software program that mimics the community of neurons in a brain. It is a subset of system mastering and is referred to as deep mastering as it uses deep neural networks. Deep mastering algorithms are built with linked layers. The first layer is referred to as the Input Layer. The final layer is referred to as the Output Layer. All layers in among are referred to as Hidden Layers. The phrase deep way the community be a part of neurons in extra than layers. Each Hidden layer consists

of neurons. The neurons are linked to every different. The neuron will manner after which propagate the enter sign it gets the layer above it. The power of the sign given the neuron withinside the subsequent layer relies upon at the weight, bias and activation feature. The community consumes big quantities of enter statistics and operates them via more than one layers; the community can analyze an increasing number of complicated capabilities of the statistics at every layer. Deep mastering is a effective device to make prediction an actionable result. Deep mastering excels in sample discovery (unsupervised mastering) and understanding-primarily based totally prediction. Big statistics is the gasoline for deep mastering. When each are combined, an organisation can attain extraordinary outcomes in time period of productivity, sales, management, and innovation. Deep mastering can outperform conventional technique. For instance, deep mastering algorithms are 41% extra correct than system mastering set of rules in picturegraph classification, 27 % extra correct in facial popularity and 25% in voice popularity.

B.ReactJS

ReactJS essentially is an open-supply JavaScript library that is used for constructing person interfaces especially for unmarried web page packages. It's used for managing view layer for internet and cell apps. React additionally permits us to create reusable UI components. React became first created with the aid of using Jordan Walke, a software program engineer operating for Facebook. React first deployed on Facebook's newsfeed in 2011 and on Instagram.com in 2012. React permits builders to create big internet packages which could alternate statistics, with out reloading the web page. The essential motive of React is to be fast, scalable, and simple. It works simplest on person interfaces in utility. This corresponds to view withinside the MVC template. It may be used with a aggregate of different JavaScript libraries or frameworks, consisting of Angular JS in MVC.

Features

JSX: JSX stands for JavaScript XML. It is an XML/ HTML like syntax utilized by React. It extends the ECMAScript in order that XML/ HTML like textual content can co-exist alongside withJavaScript react code. This syntax is utilized by the pre-processors like Babel to convert HTML like textual content determined in JavaScript documents into fashionable JavaScript objects. With JSX, we are able to pass a step in addition with the aid of using once more embedding the HTML code in the JavaScript. This makes HTML codes clean to apprehend and boosts JavaScript's overall performance even as making our utility robust.

EXISTING SYSTEM

Artificial intelligence (AI) has confirmed large ability in lots of actual-international packages. However, a few full-size concerns like fairness, transparency and trustworthiness are nonetheless tough whilst making use of AI to trust-orientated packages consisting of E-vote casting. E-vote casting performs a full-size function in democratic societies, which calls for electorate and initiators have robust mutual trust. In this paper, we goal to facilitate the consolidation of AI ecosystems with the aid of using growing a blockchain-primarily based totally traceable self-tallying e-vote casting device. We take gain of an event-orientated linkable institution signature and a homomorphic time-lock puzzle to stability the anonymity and accountability, and the vote casting scale and performance of an e-vote casting device. The proposed e-vote casting protocol helps extra capabilities like multi-desire and self-tallying. We show that the proposed protocol satisfies anonymity, time-bounded privacy, linkability and full-traceability. We additionally examine the time price of off-chain operations and the fueloline price of on-chain operations, which display the proposed e-vote casting protocol is realistic and may be followed in actual-international packages.

DISADVANTAGES OF EXISTING SYSTEM

There is a danger of incorrect information even as randomly discovering on net approximately the political events or approximately the election.

The device does now no longer recognition on enhancing recognition of the voter of applicants contesting of their locality.

PROPOSED SYSTEM

Electronic Voting is the same old way of undertaking elections the use of Electronic Voting Machines, occasionally referred to as "EVMs" in India. The use of EVMs and digital vote casting became evolved and examined with the aid of using the kingdom-owned Electronics Corporation of India and Bharat Electronics withinside the 1990s. They had been delivered in Indian elections among 1998 and 2001, in a phased manner. The digital vote casting machines were utilized in all fashionable and kingdom meeting elections of India when you consider that 2014. In India, the vote casting device commonly makes use of the guide technique in which electorate queue up in a bodily area to solid their votes for his or her picks. Manual vote casting device with none doubt does now no longer result in 100% vote casting price. This assignment generally focuses to offer the human beings an real clinical network with events' coverage positions, with appreciate to their constituencies. A internet utility is evolved the use of reactJS that ambitions to examine the function of the prevailing political events/independents who're contesting withinside the impending kingdom election. The assignment additionally allows the not unusualplace guy to take a survey with the questionnaire to specific his/her willingness and perspectives at the current/impending kingdom election. This internet utility additionally allows the

kingdom authorities in attaining 100% vote casting price withinside the kingdom elections with the aid of using supplying an e-vote casting device allowing Face Detection authentication.

SYSTEM ARCHITECTURE

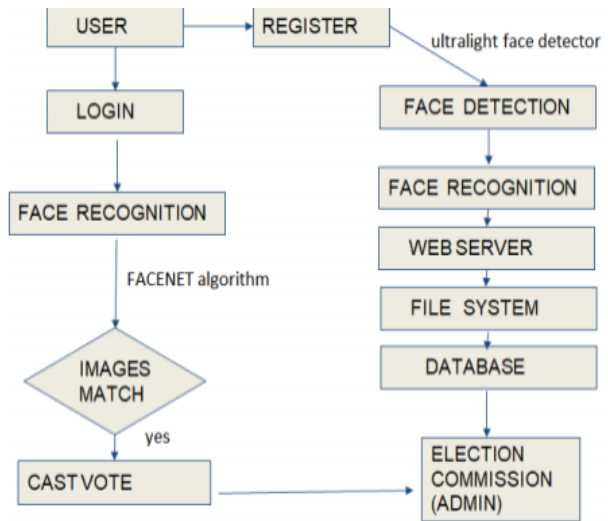


Fig:1 USER MODULE

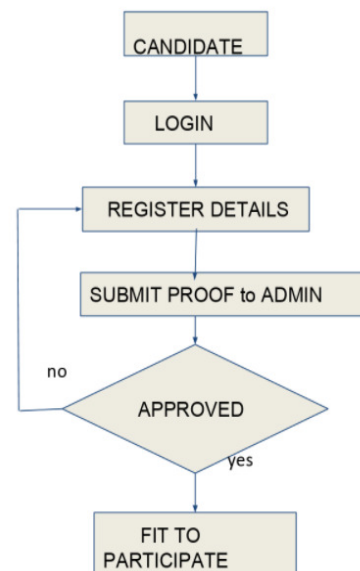


Fig 2: CANDIDATE MODULE

MODULES AND DESCRIPTION

Data set Collection

A statistics set is a group of statistics. Deep Learning has grown to be the pass-to technique for fixing many tough actual-international problems. It's genuinely with the aid of using some distance the high-quality acting technique for pc imaginative and prescient tasks. The picturegraph above showcases the energy of deep mastering for pc imaginative and prescient. With sufficient schooling, a deep community can section and perceive the "key points" of every bodywithinside the picturegraph. These deep mastering machines which have been operating so properly want gasoline plenty of gasoline; that gasoline is statistics. The extra labelled statistics to be had, the higher our version performs. The concept of extra statistics main to higher overall performance has even been explored at a big-scale with the aid of using Google with a dataset of three hundred Million snap shots! When deploying a Deep Learning version in a actual-international utility, statistics need to be continuously fed to hold enhancing its overall performance. And, withinside the deep mastering era, statistics could be very properly arguably the maximum precious resource. There are 3 steps in gathering statistics.

Face Detection Module

An extensively famous challenge with a large variety of packages. It is an Object Detection Algorithm used to perceive faces in anpicturegraph or a actual time video. The set of rules makes use of aspect or line detection capabilities proposed with the aid of using Viola and Jones of their studies paper "Rapid Object Detection the use of a Boosted Cascade of Simple Features" posted in 2001. The set of rules is given a variety of superb snap shots such as faces, and a variety of terrible snap shots now no longer such as any face to teach on them. The goal right here is to discover the sum of all of the picturegraph pixels mendacity withinside the darker vicinity of the haar function and the sum of all of the picturegraph pixels mendacity withinside the lighter vicinity of the haar function. And then

discover their difference. The haar function constantly traverses from the pinnacle left of the picturegraph to the lowest proper to look for the specific function. This is only an illustration of the complete idea of the haar function traversal. In its real work, the haar function could traverse pixel with the aid of using pixel withinside the picturegraph. Also all viable sizes of the haar capabilities might be applied.

Face Recognition Module

For recognizing the face mobilefacenet has been used which is more accurate in classifying face. MobileFaceNet is a neural network and obtains accuracy up to 99.28 percent on labelled faces in the wild (LFW) dataset, and a 93.05 percent Forspotting the face mobilefacenet has been used that is extra correct in classifying face. MobileFaceNet is a neural community and obtains accuracy as much as ninety nine.28 percentage on labelled faces withinside the wild (LFW) dataset, and a 93.05 percentage accuracy on spotting faces withinside the AgeDB dataset. The community used round 1,000,000 parameters taking simplest 24 milliseconds to run and convey outcomes on a Qualcomm Snapdragon processor. On evaluating this overall performance to accuracies of 98.70 percentage and 89.27 percentage for ShuffleNet, which has many extra parameters and takes a touch longer to execute at the CPU. The researchers have made it clean to update the worldwide common pooling layer withinside the CNN with an intensity smart convolution layer, which improves overall performance on facial popularity. This improvement is simply critical because the synthetic intelligence worldsearches for green fashions that run on small compute powers that are to be had on today's cell phones. Another technique for acquiring light-weight facial verification fashions is with the aid of using compressing pretrained networks with the aid of using understanding distillation. Such processes have carried out 97.32 percentage facial verification accuracy on LFW with 4.zero MB version length. The awesome fulfillment is that MobileFaceNets achieves similar accuracy with

very small budget. MobileFaceNet structure is partially stimulated with the aid of using the MobileNetV2 structure. The residual bottlenecks proposed in MobileNetV2 are used as our essential constructing blocks. The researchers use PReLU because the non-linearity, that is higher suitable for facial verification than the use of ReLU. The researchers additionally use a quick down sampling method at the start of the community, and a linear 1×1 convolution layer following a linear international intensity smart convolution layer because the function output layer. The number one MobileFaceNet community makes use of zero.ninety nine million parameters. To lessen computational price, the researchers determined to alternate enter decision from 112×112 to $112 \times$ ninety six or ninety six \times ninety six. The linear 1×1 convolution layer after the linear GDConv layer became additionally eliminated from MobileFaceNet. This offers a ensuing community referred to as MobileFaceNet M. The researchers have used MobileNetV1, ShuffleNet, and MobileNetV2 because the baseline fashions. All MobileFaceNet fashions and baseline fashions are skilled on CASIA-Webface dataset from scratch with the aid of using ArcFace loss, for a truthful overall performance assessment amongst them. The schooling is completed at 60K iterations. To pursue in addition super overall performance, MobileFaceNet, MobileFaceNet ($112 \times$ ninety six), and MobileFaceNet (ninety six \times ninety six) also are skilled at the wiped clean schooling set of MSCeleb-1M database with 3.eight million snap shots from 85,000 subjects. The accuracy of our number one MobileFaceNet is boosted to ninety nine.fifty five percentage and ninety six.07 percentage on LFW and AgeDB-30, respectively.

DATABASE INTEGRATION

MongoDB is a cross-platform, report-orientated database that presents, excessive overall performance, excessive availability, and clean scalability. MongoDB works on idea of series and report.

Database

Database is a bodily box for collections. Each database receives its personal set offiles at the record device. A unmarried MongoDB server normally has more than one databases.

Collection

Collection is a collection of MongoDB files. It is the equal of an RDBMS table. A series exists inside a unmarried database. Collections do now no longer put into effect a schema. Documents inside a group will have exceptional fields. Typically, all files in a group are of comparable or associated motive.

Document

A report is a fixed of key-cost pairs. Documents have dynamic schema. Dynamic schema way that files withinside the identical series do now no longer want to have the identical set of fields or structure, and not unusualplace fields in a group's files can also additionally keep exceptional styles of statistics.

RESULTS

Project is evolved with an internet utility the use of react JS for on line vote casting ballot device. Two logins are enabled one for the overall person and the alternative for the candidate login. On a success login into the person web page the person can sign in his/her non-public details. A separate tab is given for the applicants to publish their manifestos for the overall public for viewing. Thus, from the above outcomes and discussion, it's miles clean a secure on line ballot device has been efficiently evolved.

CONCLUSION

This assignment is used to offer a steady option to allow steady on line vote casting the use of an internet utility evolved the use of a javascript framework reactJS. By this assignment we successfully allow the overall public to understand

approximately their applicants. Thus, this assignment presents an inexpensive and green way to allow the overall public to safely solid their vote.

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