

Presence less, Contact less, any time
any where service delivery to Citizens

leveraging

Artificial Intelligence, Machine
Learning, Big Data and Deep learning :

“Experience of Telangana”

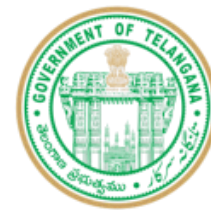
Pendyala Srinivas
Information Technology Department
Government of Telangana
February 2023



Agenda



- Context setting
 - ✓ Issues in existing Citizen service delivery
 - ✓ 4 specific Citizens Service scenarios
 - ✓ How they can be re engineered
 - ✓ How latest technologies AI, ML, Big Data and Deep Learning can help
- Use by Citizens for Transport department services
- Use by the Retired Government pensioners
- Use by students in Degree college online admissions
- Use by Election Commission of India in Elections including e Voting
- How other state Governments and Central Government can benefit.
- Analysis of results.
- Conclusion



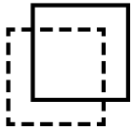
Context setting

Well known definition of Democracy

“Democracy is the government of the people, by the people, for the people”
- Abraham Lincoln

Twin objectives

1



Transparent Service Delivery

2



Citizen convenience as central theme without compromising accuracy

Role Model



Estonia

(A European Country)






- Through X Road platform
- Only for 3 services relating to marriage and purchase of immovable property, citizens visit Government Office.
- All other services are in presence less and contact less manner through smartphone/PC.
- GOI send senior officers to Estonia regularly to study.






Issues faced in Citizen service delivery currently



Where we are

Where we want to be

-  **Physical Presence**
-  **Jurisdiction Specific Office**
-  **Contact with Bureaucracy. Discretion**
-  **Filling of paper forms**
-  **During office hours**

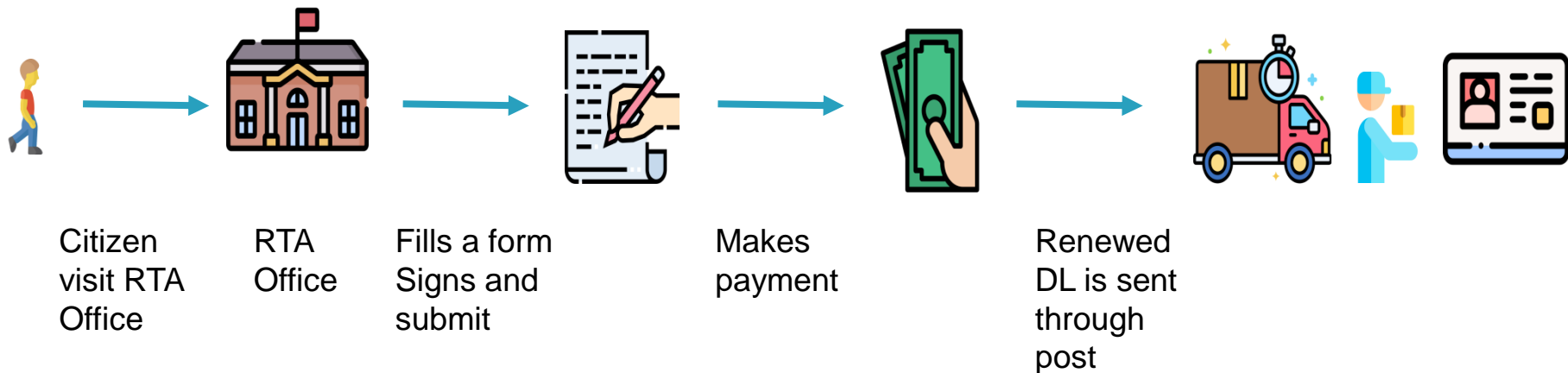
-  **Presence less**
-  **Jurisdiction free**
-  **Contact less. No discretion**
-  **Paperless**
-  **Anytime (24*7*365)**

Transport Department of Telangana offers 55 services



Across 4 categories (Driving License, Learning License, Permit & registration Services)

Current process of DL renewal/Duplicate DL/Change of address



Issues in the existing process

- 1** → ✖ **Transparency issues**
- 2** → 🕒 👤 👤 👤 ➔ **Rush at Transport Office**
- 3** → 🕒 🖨️ **Available during working days**
- 4** → 🤝 + **Not much value addition by the department**

There are about 3 lakh pensioners in Telangana.

Three existing methods for obtaining Annual Life Certificate

Sub Treasury Office where retired



Bank of the pensioner



Meeseva centre through Aadhar based bio metric authentication



Registration for Degree college admissions



About 4,00,000 students apply for admission to degree colleges in Telangana every year

Through Degree Online Service of Telangana DOST portal –
Process Flow



Registration using Aadhaar. Aadhar number is available in Intermediate



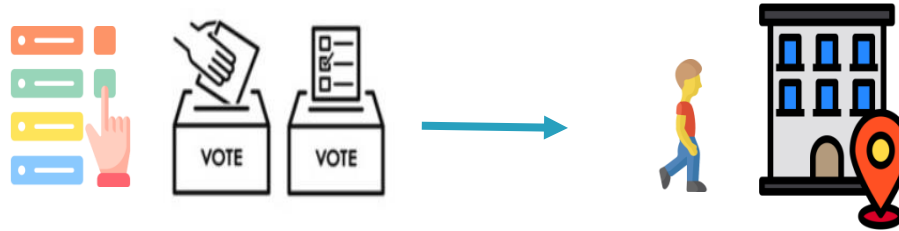
Student has to visit any Mee Seva centre

Do Aadhaar authentication along with Intermediate Hall Ticket number

Or

Can do online OTP authentication of Aadhar


Voting Related questions

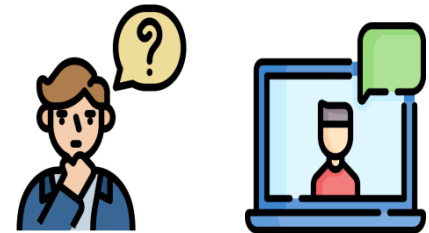


Voting process

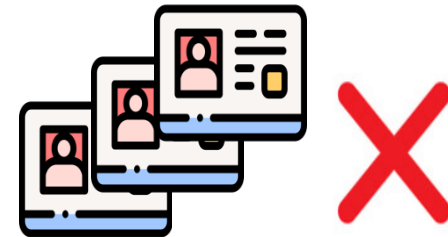
Physical presence required

Three questions?

Whether voting in general elections can be done remotely through a smart phone. Estonia  has achieved this.



Is One citizen one Voter Card without duplicates possible?






Can identification during the voting at a polling booth be done by a system instead of manual process?



Why physical presence is insisted in Offices



Following 3 Manual Checks performed in Office

-  1 The name in the application form with the name on the ID card
-  2 The photograph in the application form with the photo ID card and the face of the citizen.
-  3 An indirect check of looking at the person present

Point to Ponder

Can the manual checks be dispensed

Possibility

Whole Process over  using latest technology stacks  such as AI, ML, Big Data

ITE&C department explored and found an alternative



IT&EC department, Telangana Govt. started exploring in 2019 alternative to the 3 manual checks using latest emerging technologies



Technologies used

1

Artificial Intelligence

2

Machine Learning

3

Deep Learning

4

Big data



Idea

An intelligent IT application which can perform the three checks using smart phones at the same efficiency

Solution arrived

Real-time Digital Authentication of Identity, RTDAI, was developed.

RTDAI provides an easy, convenient and correct authentication of citizens' identity through a smartphone

Ushering in the **utopian objective of Governance** through presence less, contact less, paper less services to the citizens anytime and anywhere.



A new 3-factor authentication system is designed



User's Live Photograph

Captured Photograph

Captured Demographic Info



Input Name
Pensioner's ID (PPOID)
Registered Bank A/c No.

Image form fetched from data base

Name from Database

1

2

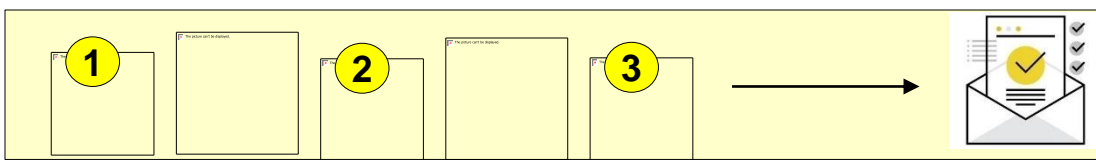
3



AI based Liveness Check

Deep learning based Image Comparison

ML based Demographic Comparison



3 Factor authentication is treated as digital authentication



Service delivery through Smart phone



Government of
Telangana

T-App Folio

Governance in your hands
anytime, anywhere





Video 1 Main Video



First application

***Friendly Electronic Services of Transport
department***

FEST

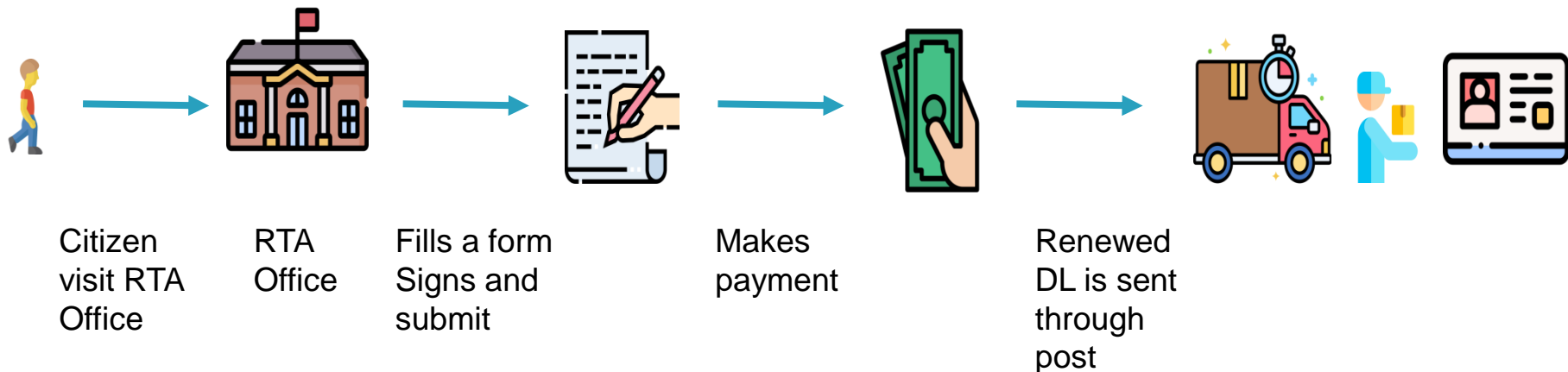
Launched in July 2020

Transport Department offers 55 services



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7 Driving License services

Renewal of DL

Duplicate DL

Issue of Badge

Surrender of DL

Change of Address in DL

DL History Sheet

Hazardous License certificate



2 Registration services

Change of Address in RC

Clearance certificate



4 Learner License services

Duplicate LL

New LL for Expired LL

LL for Addition of class of vehicle

LL for expired DL



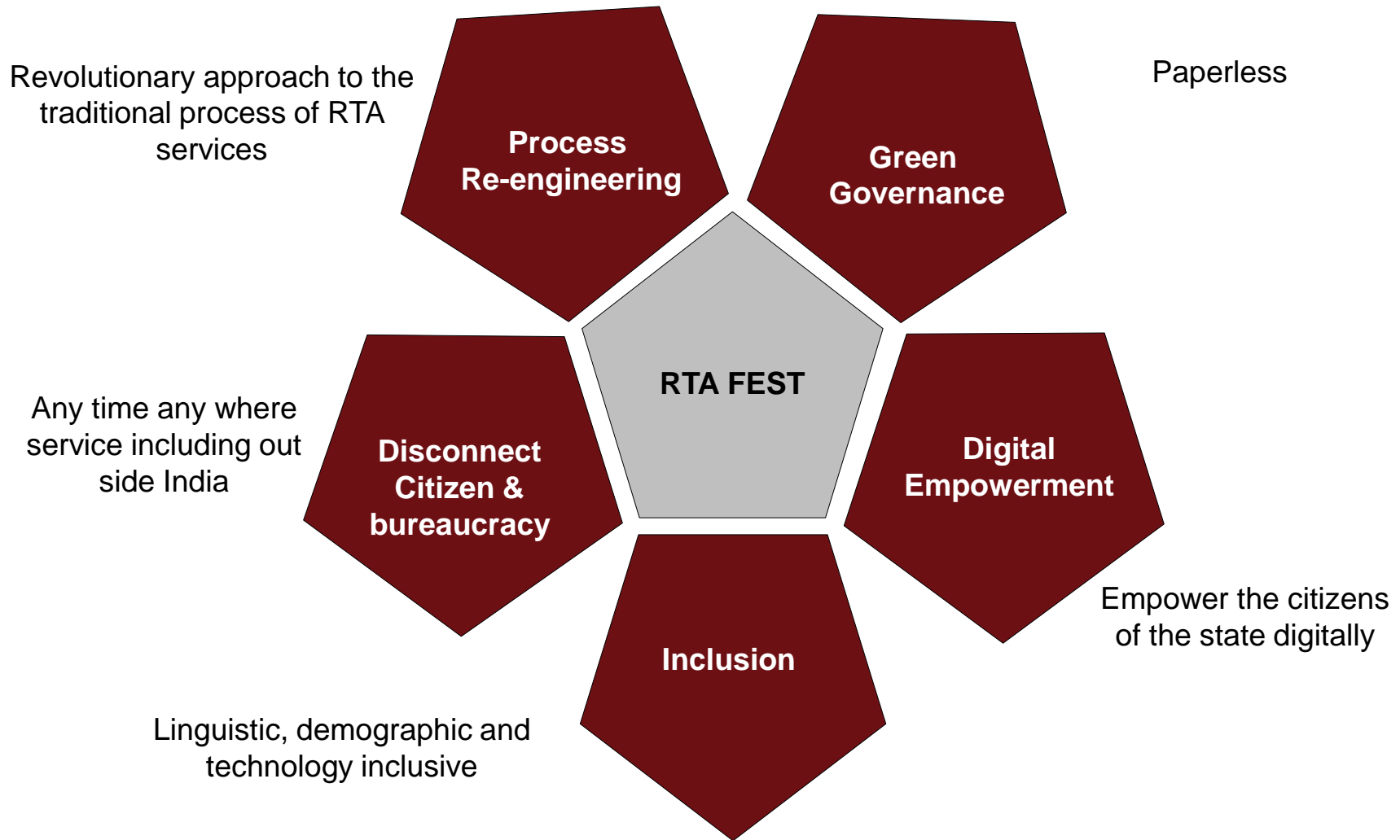
4 Permit services

New Permit issue

Duplicate Permit



Renewal of Permit


Temporary/ Special Permit



Citizen can download the certificate SMS/Email



 **GOVERNMENT OF TELANGANA**
TRANSPORT DEPARTMENT
FORM 3
LEARNER'S LICENCE 

Licence Number:	LLRTS0092922020	
Display Name		
Name	Hymavathi	
SurName	Gandepalli	
FatherName	Gandepalli Venkatswara	
Gender	M	
DateOfBirth	09/08/1991	
BloodGroup		
Qualification		
Nationality	INDIAN	
Permanent Address:	F NO 303 KAMALA NIVAS ST NO 13 HIMAYATH NAGAR HYDERABAD HYDERABAD TELANGANA -	
Present Address:	F NO 303 KAMALA NIVAS ST NO 13 HIMAYATH NAGAR HYDERABAD HYDERABAD TELANGANA -	
Marks Of Identification:	I I	

A holder of this Learner's Licence is authorised to drive throughout India subject to the provisions of Rule 3 of the Central Motor Vehicles Rules 1989, a vehicle of the following

Description:

Non Transport	MCWG
Transport	

This Licence is valid from 30/05/2020 to 29/11/2020

The applicant can take driving test after 30 days

MCWG - Motor Cycle With Gear

-
-
-
-
Add.Lloensing Authority
RTA - HYDERABAD - CZ.


Warning:

The attention of the holder of this licence is drawn to rule 3 of Central Motor Vehicle Rules, 1989 which prohibits him from driving any motor vehicle unless he has besides him a person duly licenced to drive the vehicle and in every case the vehicle carries plates both in front and in the rear of the vehicle.

Note: * No Seat Belt - No Test for LMV * No Helmet - No Test for 2 Wheeler

You are requested to bring the following documents along with your vehicle at the time of 'Driving test' at driving test track

1.Valid Original Learner's Licence	2.Valid Original Driving Licence In case of addition of new class of vehicle
3.Valid Registration Certificate	4.Valid Tax Payment
5.Valid Insurance Certificate	6.Valid Pollution under Control Certificate

* Respect the right of the pedestrians		* Do not mix drinking and driving
* Lane driving is Safe driving		* Caution and Care make accidents rare
* Overtake with caution and care		* Drive with care, Life has no spare
* Don't Overspeed, Save Life		* Prevent pollution - Save earth and health

Please book your slot for scheduling 'Driving test' at RTO Office or the transport department website <http://www.transport.telangana.gov.in>. Please book immediatly to avoid disappointment.

Above in an example of Learner license from FEST

ఆర్టీఐలో మరో 6 ఆన్లైన్ సేవలు

- ఆన్లైన్లో డ్రైవింగ్ లైసెన్స్ రెన్యూవల్
- రవాణా మంత్రి పువ్వాడ అజయ్



హైదరాబాద్, నమస్తే తెలంగాణ: మీ డ్రైవింగ్ లైసెన్స్ ను రెన్యూవల్ చేయించుకోవాలంటే ఇకపై మీరు ఆర్టీఐ కార్యాలయానికి వెళ్లనక్కర్లేదు. ఇంటినుంచే ఆన్లైన్లో దరఖాస్తు చేసుకుని.. మీ పనులు ముగించుకోవచ్చు. ఇప్పటికే 5 రకాల సేవలను ఆన్లైన్లో ఉంచిన రవాణాశాఖ.. తాజాగా బుధవారం మరో ఆరు ఆన్లైన్ సేవలను అందుబాటులోకి తెచ్చింది. ఆర్టీఐ కార్యాలయాలకు వెళ్లకుండానే ఇంటినుంచే ఆన్లైన్లో సేవలు పొందవచ్చని రవాణాశాఖ మంత్రి పువ్వాడ అజయ్ కుమార్ ఒక ప్రకటనలో తెలిపారు. కొత్తగా అందుబాటులోకి వచ్చిన ఈ సేవలతో ఆర్టీఐ కార్యాలయాల్లో పనుల కోసం ఏజెంట్లను ఆశ్రయించాల్సిన అవసరం ఉండదన్నారు. మధ్యవర్తుల ప్రమేయం, గంటల తరబడి క్యూలో నిలబడాల్సిన అవసరం లేకుండా నేరుగా ఆన్లైన్లోనే ఎంపికచేసిన సేవలను పొందవచ్చని తెలిపారు. అభివృద్ధిచేస్తున్న మరీకొన్ని ఆన్లైన్ సేవలను సాంకేతికంగా పరీక్షించిన తర్వాత క్రమంగా ప్రారంభిస్తామని రవాణాశాఖ కమిషనర్ ఎంఆర్ఎం రావు పేర్కొన్నారు.

తాజాగా అందుబాటులోకి వచ్చిన ఆన్లైన్ సేవలు

- డ్రైవింగ్ లైసెన్స్ పునరుద్ధరణ
- డ్రైవింగ్ లైసెన్స్లో చిరునామా మార్పు
- ప్రమాదకర లైసెన్స్ను ఆమోదించడం
- గడువు ముగిసిన లెర్నర్ లైసెన్స్ స్థానంలో కొత్త ఎల్ఎల్ఆర్
- వాహన తరగతిని చేర్చడానికి అభ్యాస లైసెన్స్
- గడువు ముగిసిన డ్రైవింగ్ లైసెన్స్ కోసం లెర్నర్ లైసెన్స్

Telangana Transport Minister launches FEST

Hyderabad, Jul 24 (UNI) On the occasion of Telangana IT and Industry Minister K T Rama Rao's birthday, Transport Minister Puvvada Ajay Kumar on Friday launched Friendly Electronic Services of Transport Department (FEST).

Duplicate LLR, duplicate License, Badge, Smart Card in lieu of Surrender of Existing Driving Licence and History Sheet for License and among other services are able to avail through the FEST. **Please log in to get detailed story.**

Award / Recognition



Nasscom AI Gamechanger Award 2022

Social Media Coverage: Tweet link -
<https://twitter.com/NasscomR/status/1543895610193235968/photo/1>

FEST won the Digital Technology Sabha Award, 2021 in the Artificial Intelligence category



• LIVE

sas

Shikha Singh

DIGITAL

Technology

Sabha

EXCELLENCE AWARDS

An Express Group Initiative

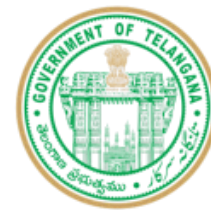
WINNER

TRANSPORT DEPARTMENT,
GOVERNMENT OF TELANGANA

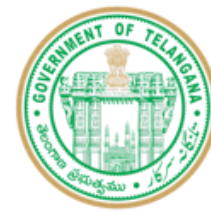
CATEGORY

ARTIFICIAL INTELLIGENCE

EXPRESS
COMPUTER



Video 2 Video of the Renewal of Driving License



Second application

Pensioners Life certificate through Selfie

PLCS

launched in Nov 2019

There are about 3 lakh pensioners

Three Methods

1

Sub Treasury Office
where retired



2

Bank of the pensioner



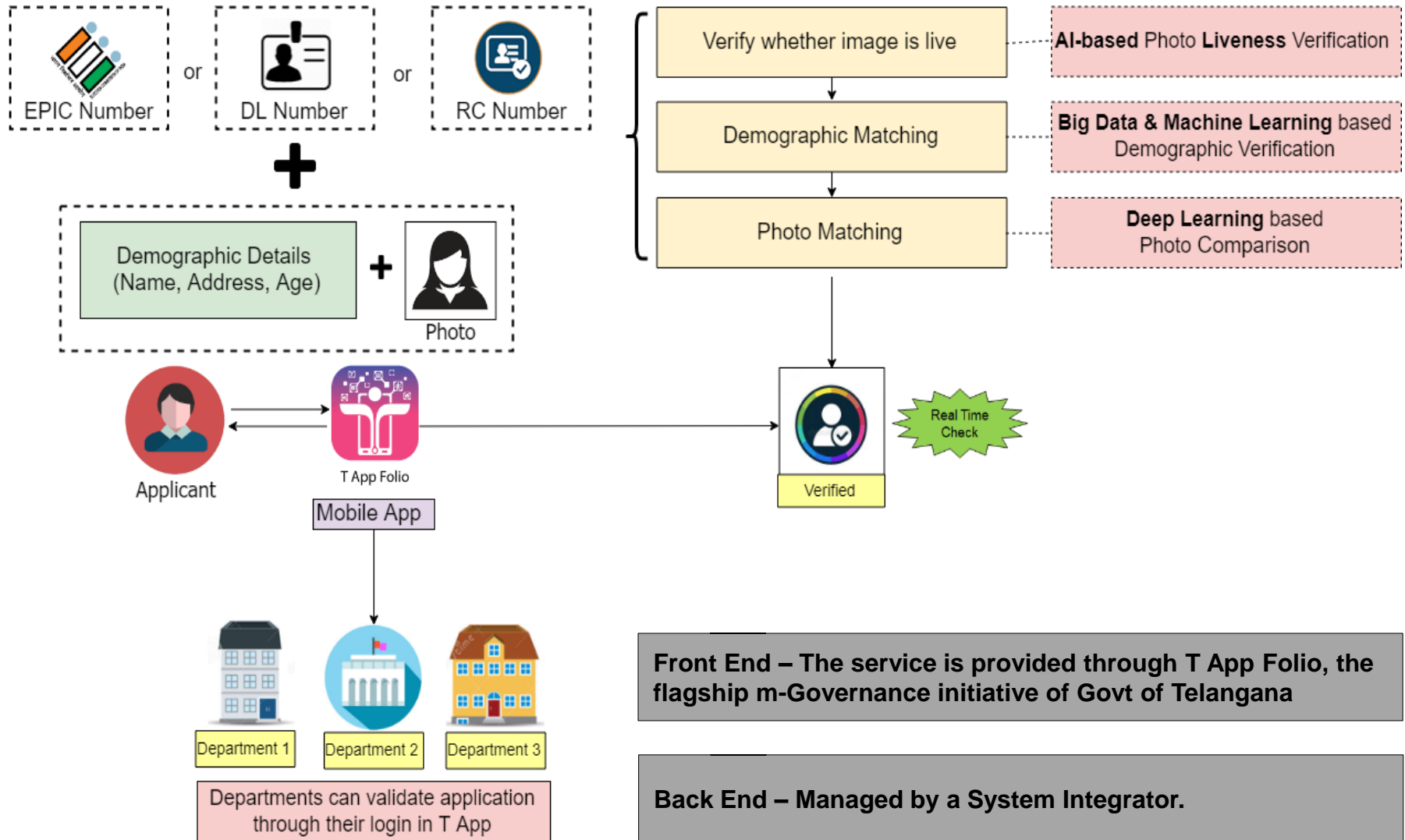
3

Meeseva centre through
Aadhar based bio metric
authentication



Pensioner Life certificate through Selfie was launched in Nov 2019 as a 4th Method through a smart phone


Architecture & process flow of PLCS



An example of a pensioner's authentication



Submitted Details 05001427




PPO ID: XXXX1427

Name: R GANESH

Voter ID: NA


Compared Details




Name as per Voter ID: GANESH R

Name as per PPOID: GANESH R

Results



Liveness Matched



Demographics Matched




Photo Matched

06-01-2021, 14:47



Directorate of Treasury & Accounts
Government of Telangana

Digital Life Certificate for the Financial year 2020-21

PPO ID : 97101011ATY8172

Pensioner Name : Vijay

Transaction Reference Number : 9710101319R11

Life Certificate Date : 22-Nov-2019 16:12:25



For any queries please reach out to us over phone at: 18004251110
or email us at: support.plcs@telengana.gov.in

సెల్ఫీతో ఆసరా!

► మొదటి సేత తరువాయి

ఇబ్రాహీంపేట అంధులు, కేరళం ఒక్క సెల్ఫీతో ఈ సమస్యలన్నీ పరిష్కారమైపోతాయి. మీరు ఇంట్లోనే ఉండి ఒక్క సెల్ఫీ తీసి పంపిస్తే చాలు... మీరు రావాల్సిన ప్రయోజనాలు నేడూ అందుకోవచ్చు.

ఎలా చేయాలి?

అందుకే సాంకేతికతతో మానుషత్వం మన రాష్ట్రంలో కేరళానే తొలిసారిగా అభివేషించి అందించినట్లు (ఏఐ), మెషిన్ లెర్నింగ్, ఇతర అత్యాధునిక సాంకేతిక పరిష్కారాలను సమన్వయం చేసి ఓ ప్రాజెక్టును అభివృద్ధి చేశారు. మూడు రకాల సాంకేతికతలను ఒకటేట చేర్చి దాని మొత్తం యాంత్రిక అనుసంధానం ద్వారా ఈ విమానం సాంకేతికత రూపొందించారు. ఇప్పటివరకు కేరళాలో రెండు రకాల సాంకేతికతలను ఒకటేట చేర్చి పరిష్కారం సాధించగా... మన ద్వారా ముందుగా సాంకేతికతలను ఉపయోగించిలా సిద్ధం చేసిన యాంత్రిక రాష్ట్ర ప్రయత్నం అర్ధ రోజులోని తెలుగు రాష్ట్ర ప్రయోజనం సర్దుబాటు చేసే పనిని పూర్తిచేసింది. ఒక్క సెల్ఫీతోనే మీరు ఖర్చు తక్కువ ప్రయాణమవుతుంది. ఈ మొత్తం అప్రెంటిస్ షిప్ తో యాంత్రికత అందుబాటులో

ఉంచారు. ప్రస్తుతం మీరు కొంత మేరకు త్రొవ్వి విమానంలో ఉద్దేశించి పెన్షన్ పంపిణీ కోసం వినియోగిస్తున్నారు. రెండు మూడు నెలల్లో మీరు ఈ విమానంలో పరింతగా విస్తరించవచ్చు.

అప్రెంటిస్ ప్రయోగాత్మకంగా... ఈ కొత్త యాంత్రిక అసరా పంపిణీ విషయంలోనూ ప్రయోగాత్మకంగా వినియోగించారు. కీలకంగా ముఖ్యమంత్రియ్యి వినియోగించారు. సెల్ఫీ తీయడం ద్వారా అసరా పంపిణీ కోసం సంగ్రహించిన ఓ మొత్తం యాంత్రిక ప్రాజెక్టుగా పరిశీలించి చూడారు. ఈ గ్రామంలో 60 మంది వృద్ధులకు పంపిణీ పాండు తప్పి వారిని మొత్తం యాంత్రిక పరిశీలించగా 55 మంది విమానం సైన్స్ చేసి తీసింది. ఒక్కరి విషయంలో విమానం సరిగా లేకపోవడంతో కేటా బోర్డులోని సమాచారంతో మార్పు చేశారు.

ప్రయోజనాలేంటి? పవన్ విమానం చేసిన అప్రెంటిస్ పంపిణీ అసరా పంపిణీ విషయం, వివిధ సర్వేయ పత్రాలు, అభివృద్ధి కార్యక్రమాల అభివృద్ధి కేంద్రం ఉన్నాకా లేదా నిజమైన లక్ష్యాలతోనే ఇవి అందుతున్నాయో అని కచ్చితంగా తెలుసుకు

నేందుకు ఈ మొత్తం యాంత్రిక ఉపయోగించారు. అలాగే తొమ్మిది లక్షలకు పెన్షన్, ఇతర సర్వేయం కోసం లేదా కార్యక్రమాలకు వెళ్ళాల్సిన అవసరం లేకుండానే ఇంటి వద్దనుంచి సెల్ఫీ తీసుకుని అసరా పంపిణీ చేసుకోవచ్చు. కుటుంబం ది. ఇక పవన్ విమానం చేసిన ప్రాజెక్టు ఉద్దేశించింది. ఇక పవన్ విమానం చేసిన ప్రాజెక్టు ఉద్దేశించింది. ఇక పవన్ విమానం చేసిన ప్రాజెక్టు ఉద్దేశించింది.

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TS to push new digital authentication

This comes close on the heels of the technology being successfully implemented in Pensioners Life Certificate authentication through Selfies (PLCS) which has already garnered 13,000 applications in less than one year of its launch



By Sruti Venugopal | Published: 20th Nov 2019 12:01 am Updated: 19th Nov 2019 9:57 pm

Hyderabad: The Telangana Information Technology, Electronics and Communication Department is looking to push the Real-Time Digital Authentication of Identity (RTDAI). The department is looking to use the technology in services that requires identity authentication – ranging from entry at exam centre, voter ID authentication and even entry at temples.

ఎగిరిపోతే ఎంత హుష్ బావుంటుంది..!

► మొదటి సేత తరువాయి

రాజ్ గాంధీ అంతర్జాతీయ విమానాశ్రయం (అర్బిఎం)లో ప్రయాణికుల సంఖ్య పెరుగుతుంది అని ఇందుకు నిదర్శనం. 2018-19లో



► మొదటి సేత తరువాయి

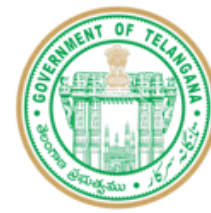
అభివృద్ధిని ప్రోత్సహించుతున్నాయి. దేశవ్యాప్తంగా అర్బిఎం మండలం వల్ల వాహనాల తరఫున చాలాగా తగ్గిపోవడం వాళ్ళు... నిర్ణయించిన వాహనాల అమ్మకం కాంట్రాక్టర్లతో ఆ రకం చాలా సమస్యలు ఉన్నాయి. మీరు కేబిఎం తరఫున ప్రస్తుతంలో కూడా ప్రయాణించారు. పరిమాణం నుంచూ మీ వాహనం వినియోగించారు.



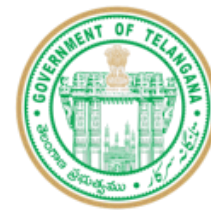
సెల్ఫీతో ఆసరా!

- విమానాశ్రయం మొత్తం యాంత్రిక రూపొందించిన డీఎస్ టెక్నాలజీ
- అసరా పంపిణీ చేయడానికి లైవ్ అప్డేట్ చేయడం
- సైలెంట్ ప్రాజెక్టు విజయవంతం
- ఒక్క సెల్ఫీతో లక్షలకు అప్డేట్ చేయడం
- కార్యక్రమాలను నిర్వహించడానే ప్రత్యేక పూర్తిచేసే పీలు
- త్వరలో అప్రెంటిస్ సేవలకూ అనుసంధానం

మీరూ 'సేత సేత' ►



Video 3 BBC Video of PLCS

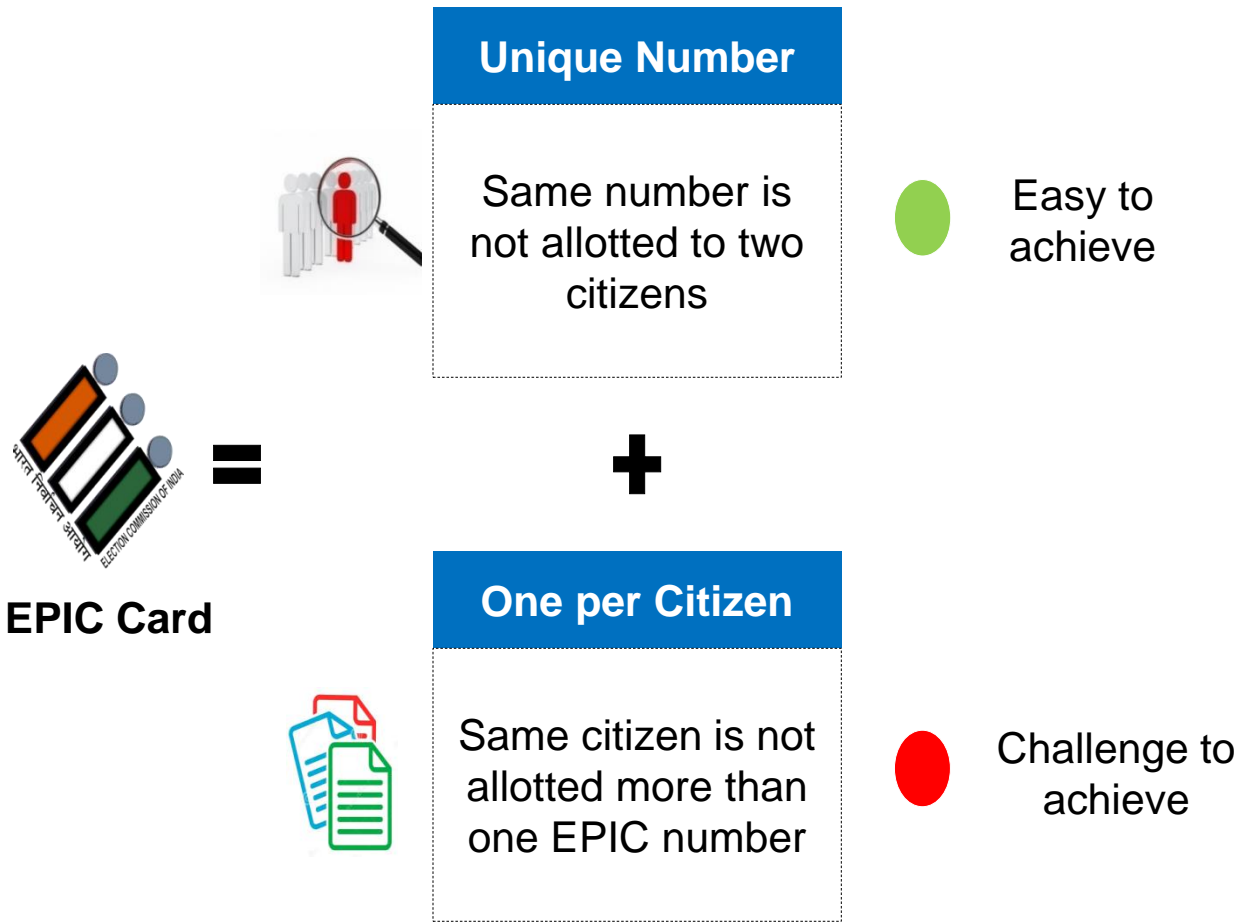


Third application

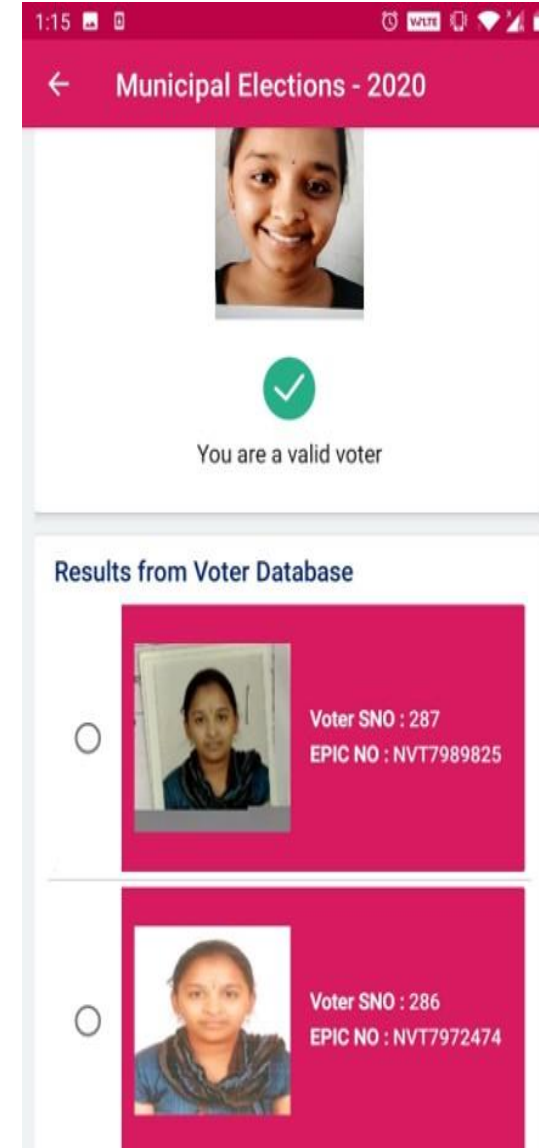
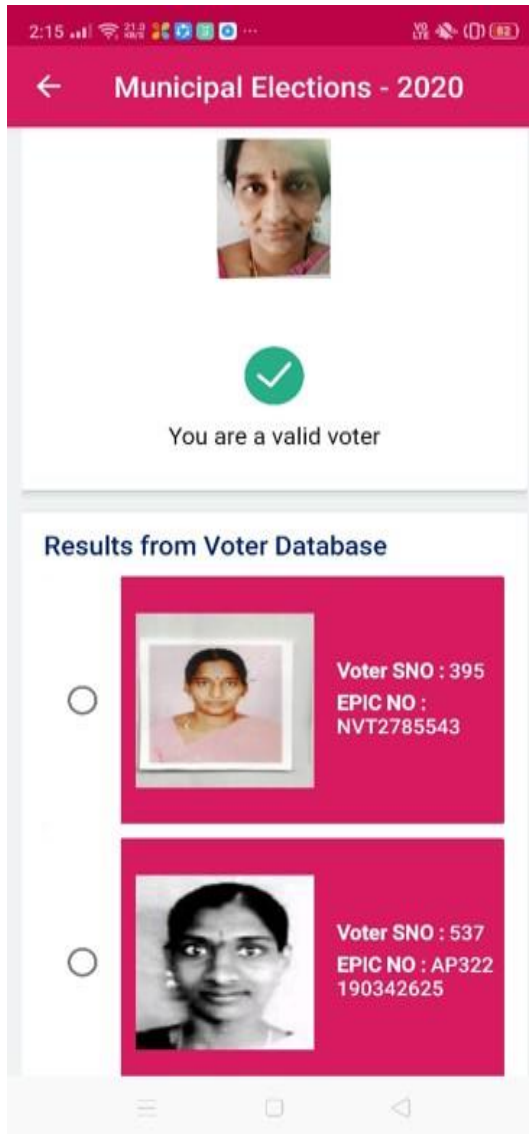
Voter Identification during elections

Pilot in January 2020

Uniqueness of EPIC Card is very important



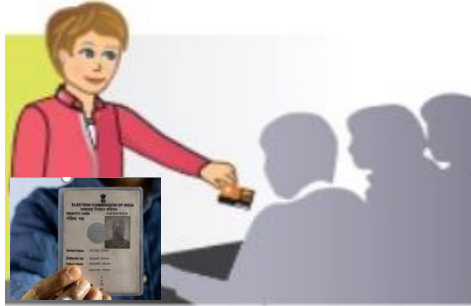
Examples of duplicate voter IDs in Kompally (Hyderabad) in Jan 2020



Voter Identification during Election



Citizen to physically present at Polling station



Polling officer verifies Citizen's voter ID.
No duplicate verification across polling booths.



Citizen votes.

Current Identification Process during voting

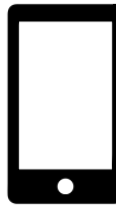
Manual Process

Manual Discretion

No Digital Trail

No Duplicate Verification

Can this be done by IT application through Photo taken in smart phone by the Polling officer



Reengineered Identification Process

Mobile application

Facial recognition

Digital Trail

Received CSI e-governance award for PLCS implementation



Telangana became the first state in India to use facial recognition technology in elections

Telangana govt introduces app for pensioners to generate life certificate

The need for real-time verification of identity for different applications has always been profoundly felt

Topics
Pensions

Bibhu Ranjan Mishra | Bengaluru
Last Updated at July 10, 2019 23:20 IST

Until earlier this year, N Papi Reddy used to have to visit Mahabubnagar, some 100 km from Hyderabad, where he has settled post retirement, to get his annual pensioner life certificate.

Today, Reddy, who retired as a superintendent at the Mandal Parishad Development Office (MPDO) of Midjil Mandal in Mahabubnagar district, uses an app on his smartphone that can generate a life certificate without him having to step outside his house. "What used to take couple of days for my father to travel all the way to Mahabubnagar to get his life certificate every year, now happens in a split ...

How Telangana government authenticates beneficiaries using AI, ML, Big Data and Deep Learning tools

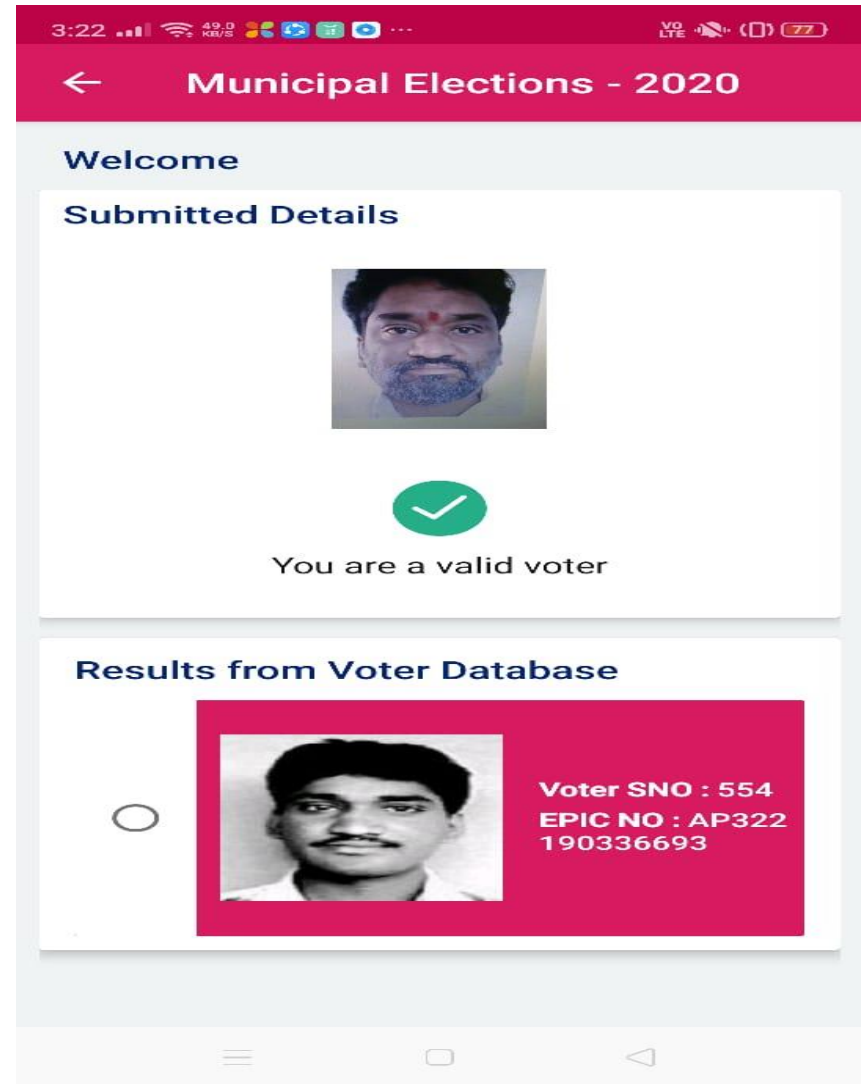
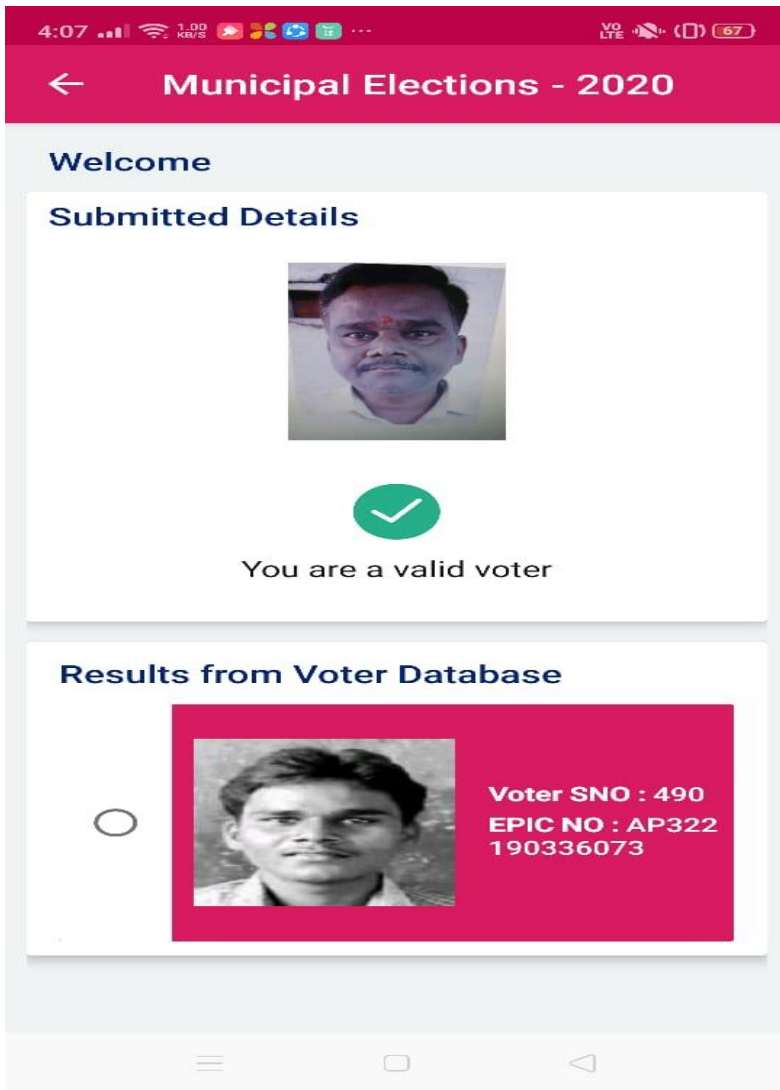
KV Kurmanath | Hyderabad | Updated on November 20, 2019 | Published on November 20, 2019

The Telangana government, which attracted criticism from privacy activists for allegedly using facial recognition software without legal sanction, has developed a method to authenticate its beneficiaries, using Artificial Intelligence, Machine Learning, Big Data and Deep Learning solutions.

"All you need to have a smart phone to remotely authenticate yourself. Take a photo and upload it in the exclusive app launched for the purpose. The software will verify the photo and demographic details in the pension database, avoiding the need to authenticate people physically," GT Venkateshwar Rao, Managing Director, Telangana State Technology Services (TSTS), has said.



Some Examples of Facial Recognition



Is e-voting, i.e., voting through smartphone possible?



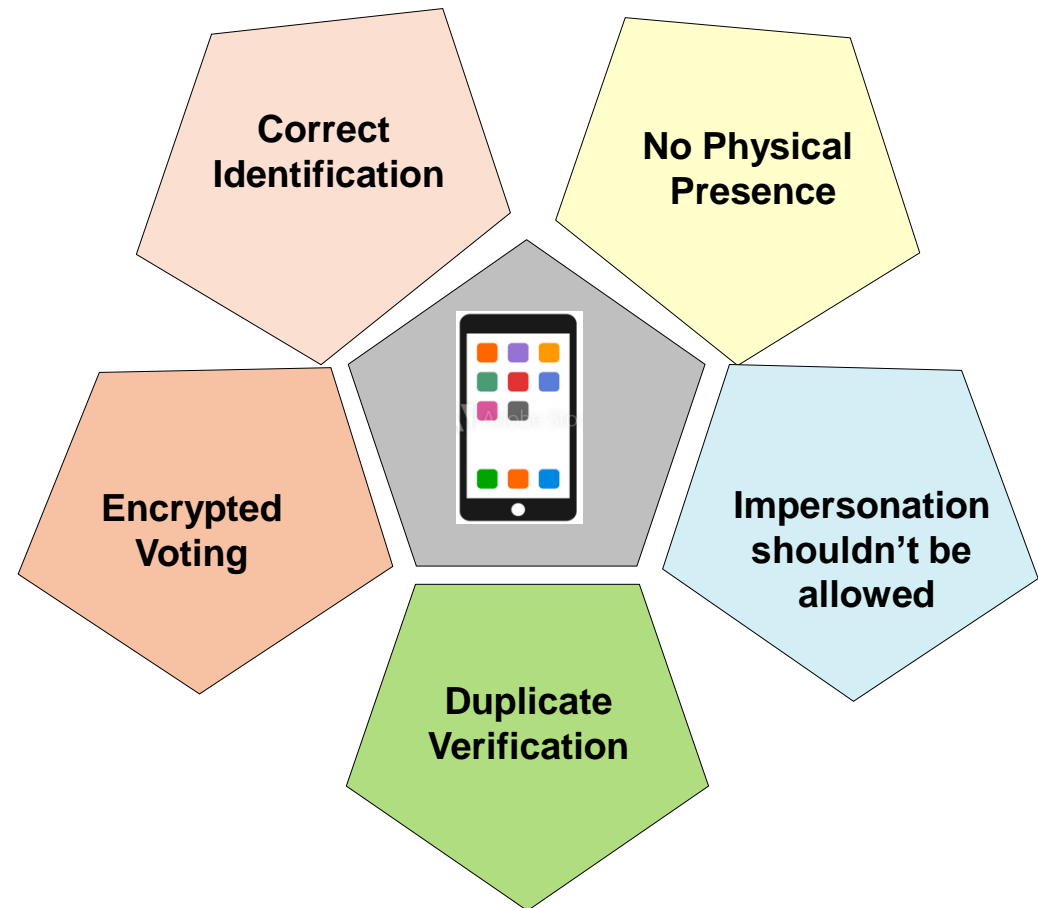
- At present Voting is through EVM.
- Voter has to personally visit a specific polling booth i.e. Jurisdiction
- On a particular day and time

Convenience & Accuracy

- Is e-Voting through a smart phone possible ?
- Ensuring Correct Identification
- Ensuring vote is not tampered after voting till counting

Technology Stack Used

- a RTDAI for identification and authentication
- b Blockchain for encryption, storage and non tampering

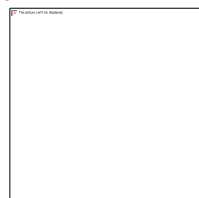




Citizens

- Registration
- Voting

RTDAI based 3 factor authentication



Registration



E-Voting



Administrator (TSEC)

- Overall Administration
- Registration of Returning Officers (RO)
 - Setting up of Voting and Registration Dates
 - Generation of Reports



Admin & RO Portal



Returning Officer (RO)

- Ward wise Ballot generation and signing
- Counting

Storage of votes on **Blockchain** to ensure immutable records



Counting

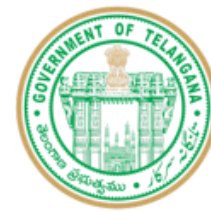
Activities

Modules



Projects rolled out in Telangana using RTDAI

1 Project	Transport Department	Pensioner Life Certificate through Selfie	Degree Online Admission
2 Launch Date	July 2020	November 2019	July 2020
3 Current Status	Active		
4 Services Onboarded	17	1	1
5 No of citizens used	400/day	40000 (2019); 41000 (2020) 1,20,000 (2021)	45000 (2020) ; 50000 (2021)
6 Channel	TApp Folio		



Where these solutions can be used?



Passport Services

100000+ (Average) applications processed by Ministry of External Affairs, GOI in a week

Main Services requiring physical presence

a



Renewal

b



Change of Address

c



Additional Booklet



State Transport Dept.

Many services can be rolled out

Services requiring physical presence

a



Renewal of license

b



Issuance of license

c



Permit Services



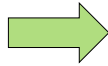
Govt. of India and States

- **More than 1 Crore pensioners of central & state Governments Government including defense, railways can benefit**

New Process



Pensioner enters Pension Id and Name in Mobile App



Pensioner clicks and uploads selfie



3 factor authentication is done



Pensioner life certificate is issued on mobile upon successful verification

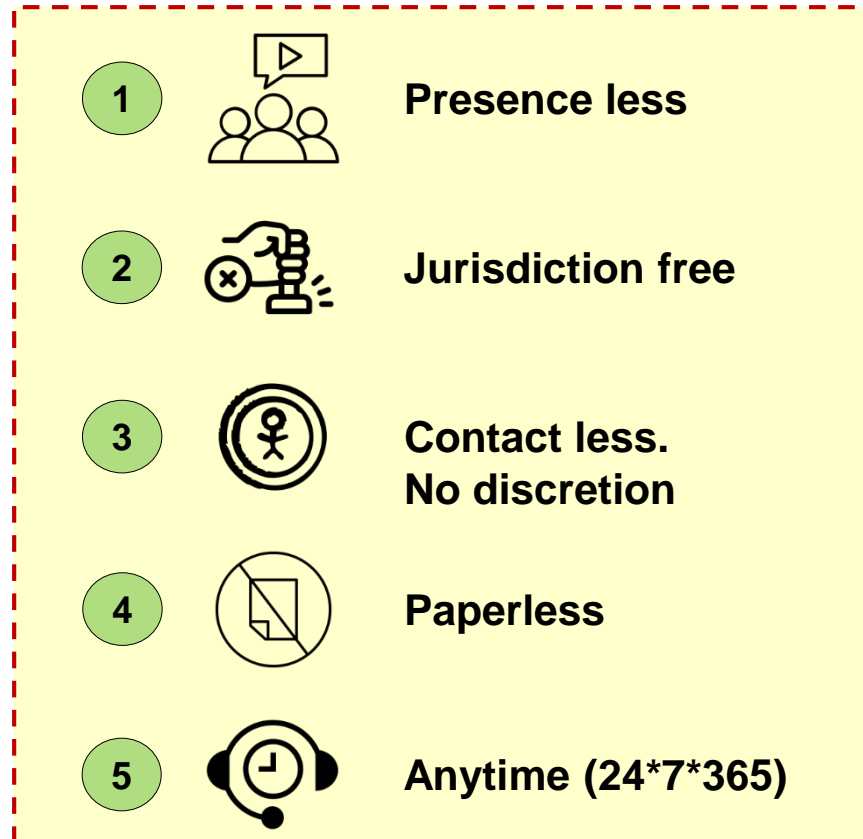


UIDAI

- ***Aadhaar authentication is being used as the primary identity verification mechanism by various entities such as Banks, Telecom companies, PDS, Income Tax etc.***
- ***Two factor authentication Bio metric (Finger Print/Iris) or OTP***
- **RTDAI can be used for an alternate three factor authentication without bio metrics**

Demographic+ Liveness+ Facial Authentication

Benefits of RTDAI



USPs

a

Easy Replicability as integration is through APIs and process flows are very similar

b

Departments across states following similar process flows (e.g., Transport) can easily adopt the feature without much customization

2020 was declared as Year of AI in Telangana.



Flagship



AI for Agricultural Innovation (AI4AI)



Pest Detection in Cotton with advisories



Newborn Risk Assessment (AI based Anthropometry)

Others



Quality Assaying of Agricultural Commodities



AgriTech Grand Challenge



Facial Recognition for Voting



Criminal Records Synchronization



Crowd Management Tool



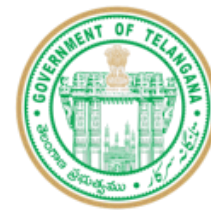
Face mask violation enforcement



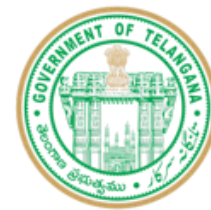
Chatbots



COVID19 Data Platform



Result analysis



Variations in names

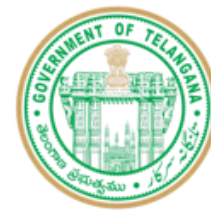
Name Variations matched



INPUT NAME	Base NAME
K ASEERVADAM	Aseervadam Kama
B.STALLA	Stella Burugula
B LAXMANASWAMY	B Lakshmanasvami
G NARAYAN REDDY	Narayana Reddy Gudhati
K.RAM BRAHMAM	Kondaparti Ramabrahmam
M Narayanamma	Narayanamma M
K.suguna	Suguna Reddy Kothapally
S v Satyanarayana murthy	Venkata Satyanarayana Murthi Srigiri
Doulath Bee	Doulatbi

Name Variations did not match

INPUT NAME	Base NAME
QUASHIR HASHMI	Syed Khaisar Hashmi
SHANKARAI AH	Jshankaraiah
Mahbabunisa begum zeenath	Mahboob Unnisa Begum
K Maldakantaiah	KANTAYYA K M
Y Sunku bai	B Sakkubai
S. PADMAVATHAMMA	S Padma





Variations in Photos


Same Persons Identified with High Confidence

SAME PERSONS Identified with High Confidence more than 90%

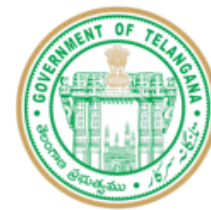


Similarity: 98.196	
Input Image	Base Image
	

Similarity: 97.501	
Input Image	Base Image
	

Similarity: 99.169	
Input Image	Base Image
	

Similarity: 93.200	
Input Image	Base Image
	







Variations in Photos



Different PERSONS rejected by the system

Identified as different persons and not matched (less than 50%) Correctly done by the system

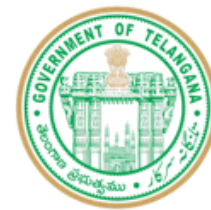


Similarity: 35.113	
Input Image	Base Image
	

Similarity: 19.461	
Input Image	Base Image
	

Similarity: 38.804	
Input Image	Base Image
	

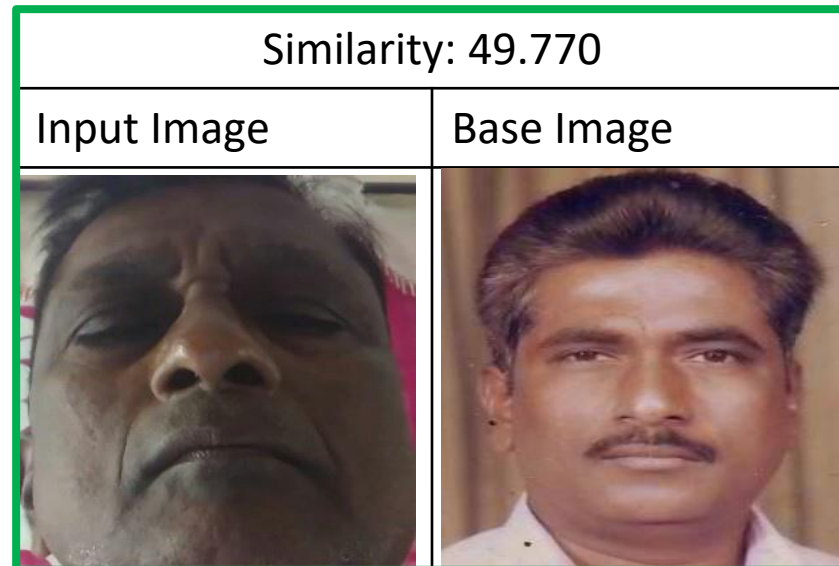
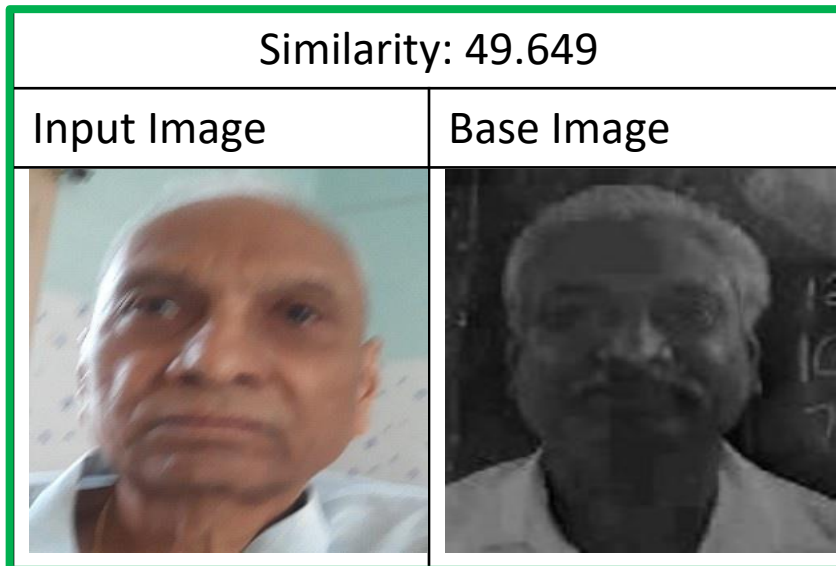
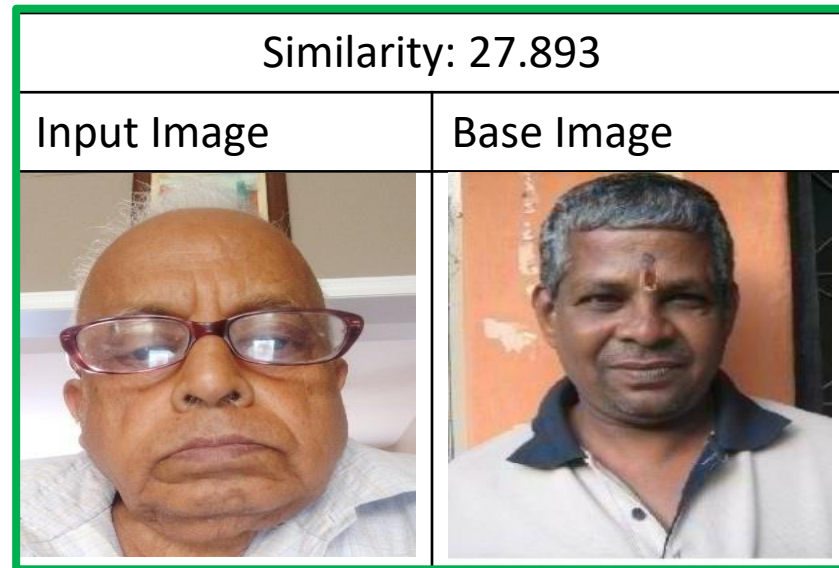
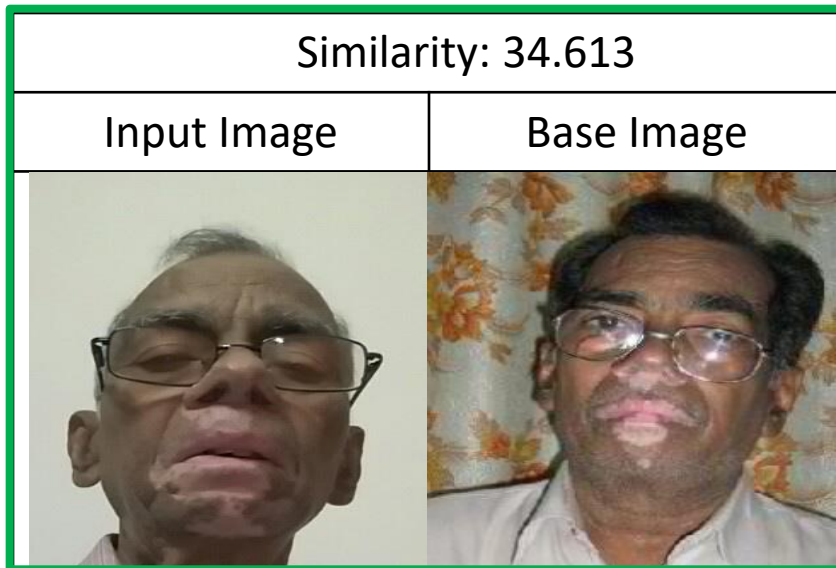
Similarity: 26.770	
Input Image	Base Image
	



Variations in Photos

SAME PERSONS could not be identified by the System

Identified as different persons and not matched (less than 50%) In Correctly done by the system





Thanks