National Conference on e-Governance

04.09.2024

Transitioning towards transparent governance: e-Governance in Maharashtra

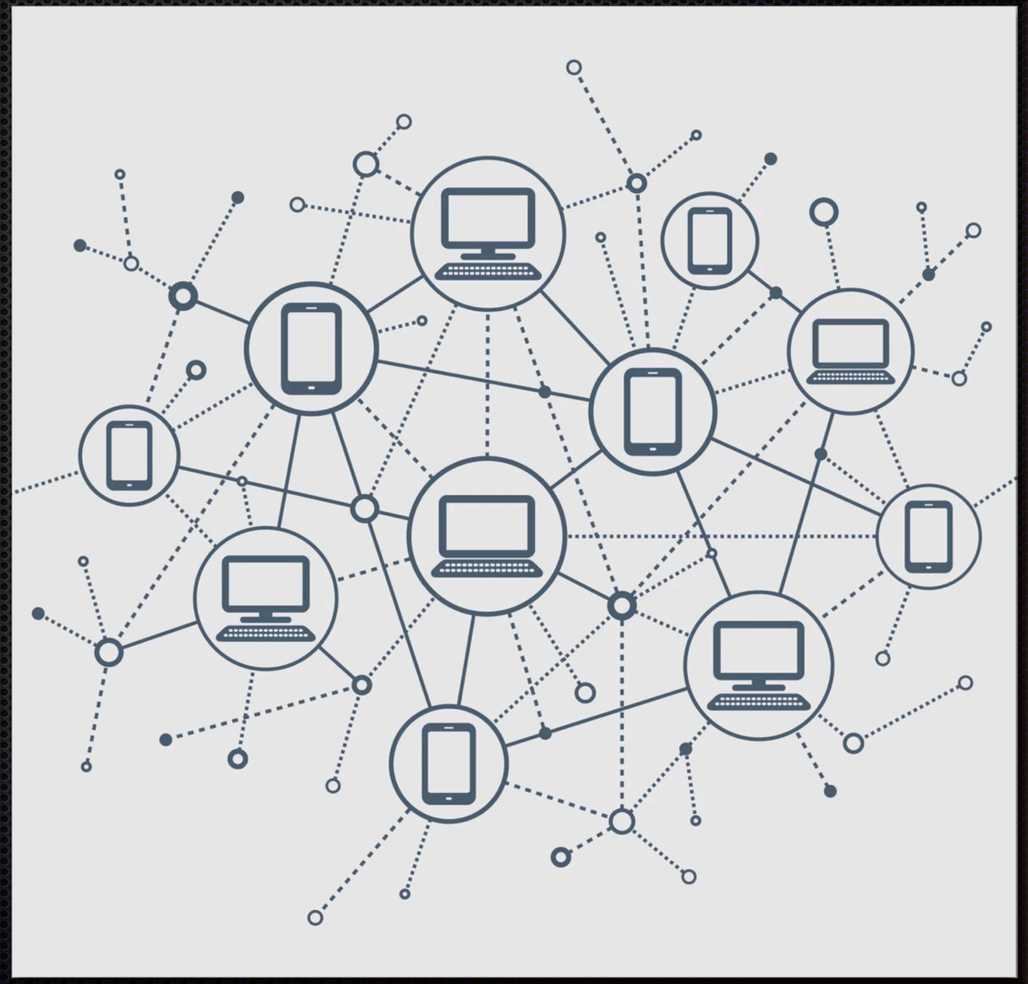
Shubham Gupta, IAS
Municipal Commissioner, Sangli-Miraj-Kupwad City Municipal Corporation

These projects were executed during my previous posting as Assistant Collector, Etapalli and Project Officer, Integrated Tribal Development Project, Bhamragad in Gadchiroli district from June 2021 to July 2023

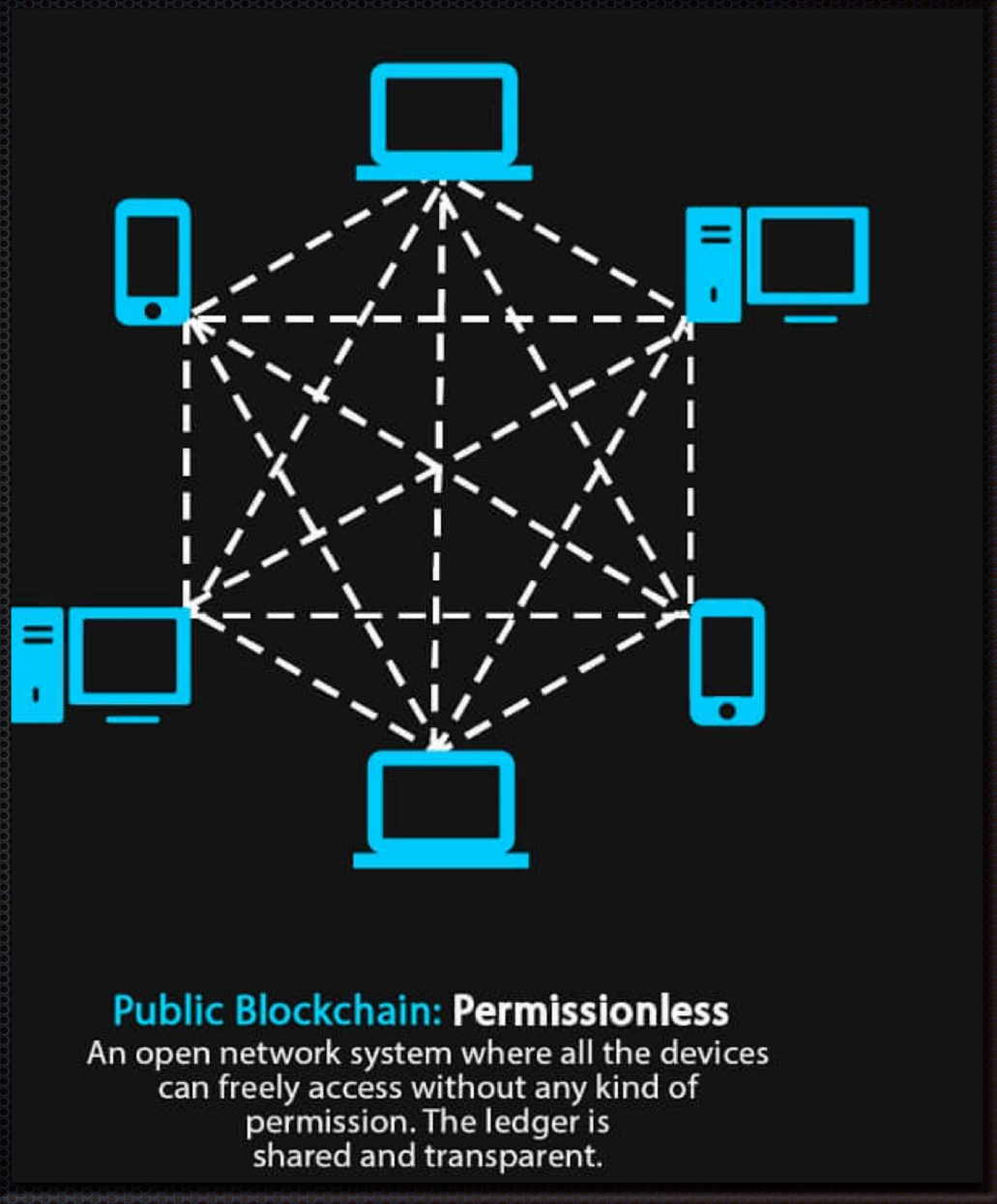
Issuing Caste Certificates on BLOCKCHAIN

Why?

- Supporting the state administration to curb the menace of forgeries, and identify the right beneficiaries for delivery of government schemes/benefits
- Decentralization-aligned, deplatformation-resistant alternative
- Publicly accessible information still dependent on human trust (paper records) or data in government cloud repositories, susceptible to controls, biases and manipulations
- Transition from fiat information (it's true because an officer said so!) to code based information

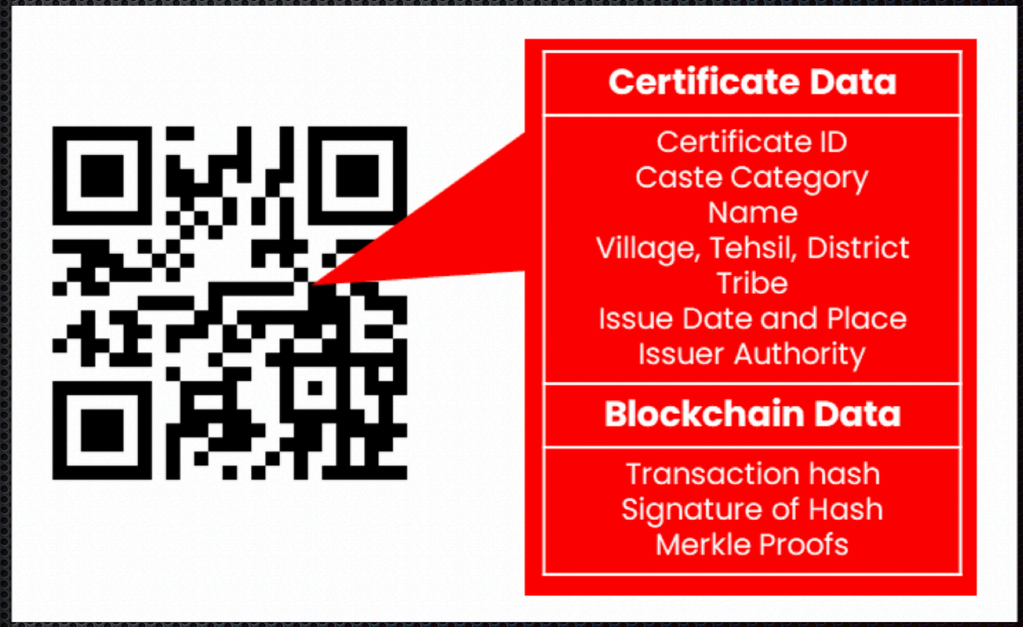


- Public blockchains (eg: Ethereum, Polygon POS) are open state databases that anyone can audit or read or write on
- Public blockchains make up the best ledger of record to commit or anchor citizen records to impart the highest level of reliability, immutability, security, open access and transparency
- Concept of true democratization of e-governance using Web3: a crucial inspiration to implement blockchain based caste certificates in Etapalli



What?

- State issues digitally signed caste certificates to its citizens via the ‘MahaOnline’ portal
- Internally trackable, no easy mechanism for external third parties to verify
- Cryptographically commits selective details of every caste certificate fetched from the ‘MahaOnline’ portal on the polygon POS blockchain
- Generates unique QR code consisting of blockchain-proofs which are embedded on each caste certificate
- Open verification system available on the government website will enable entities to instantly authenticate certificates with the help of uncensorable, publicly auditable data stored on-chain (on public blockchain)

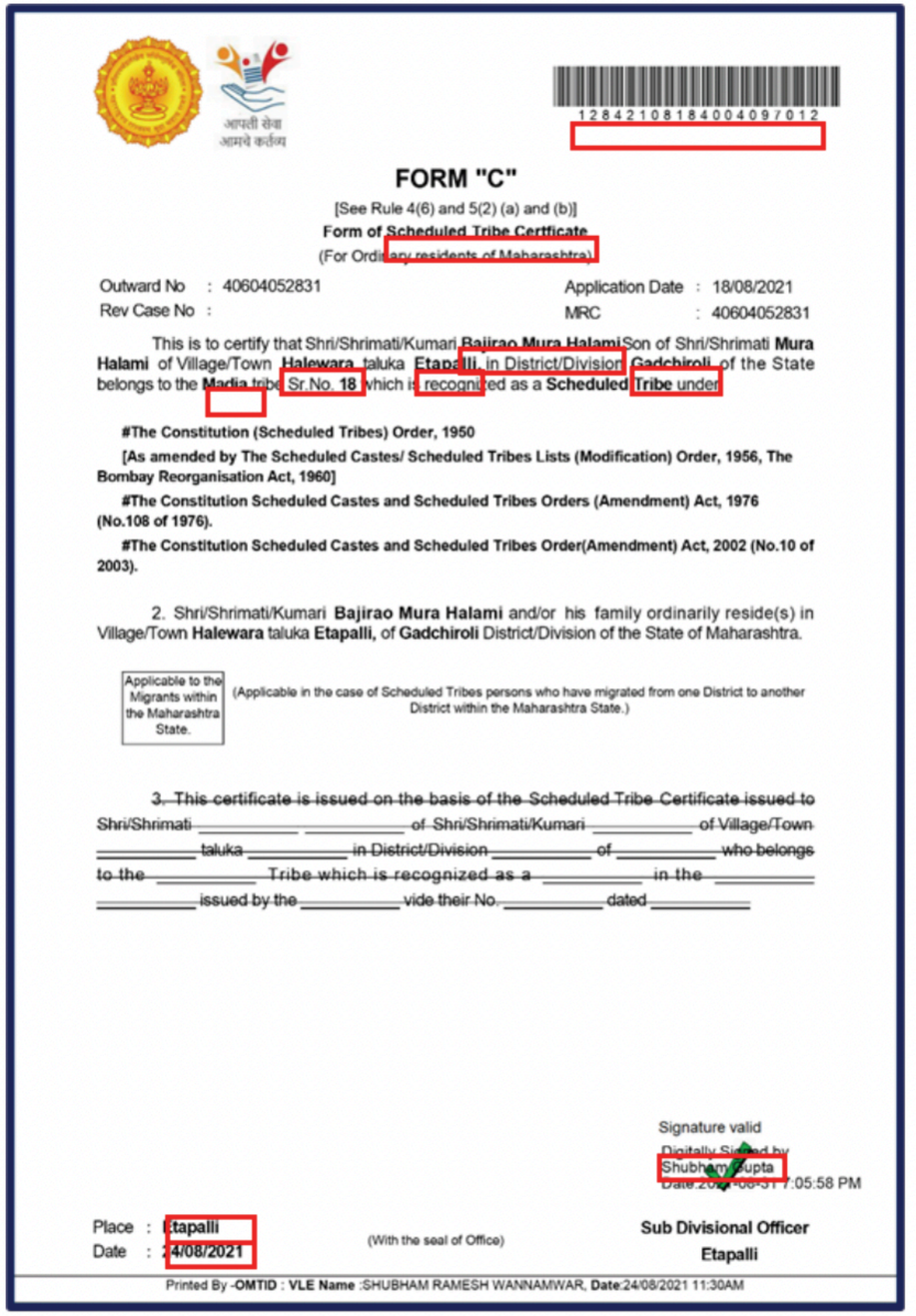


How?

- Blockchain system consists of an Issuance DApp (DApps are decentralized applications built on top of public blockchains) and a Verification DApp
- The issuance DApp is installed on the SDO's (Sub Division Officer) system, where blockchain enabled caste certificates are generated

Issuance DApp

- Step 1: PDF certificates generated by MahaOnline portal are input to the issuance DApp
- Step 2: Issuance DApp parses the important fields and calculates hashes (SHA 256 Hash) of each field; Hashes are irreversible fingerprints of digital data
- Step 3: Issuance DApp further combines all hashes together to produce a single final hash. This final hash is stored on Polygon POS blockchain smart contract mapped against the on-chain digital signature of the SDO
- Step 4: Upon successful upload of the final hash (for each certificate) on the blockchain, the blockchain returns transaction data. The same is captured by the issuance DApp
- Step 5: The issuance DApp generates a QR code consisting of blockchain transaction data and the important fields parsed originally from the certificate. This QR code is appended to the original caste certificate to form a blockchain-powered caste certificate



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FORM "C"

[See Rule 4(6) and 5(2) (a) and (b)]

Form of Scheduled Tribe Certficate

(For Ordinary residents of Maharashtra)

Outward No : 40604052831 Application Date : 18/08/2021

Rev Case No : MRC : 40604052831

This is to certify that Shri/Shrimati/Kumari **Bajirao Mura Halami** Son of Shri/Shrimati **Mura Halami** of Village/Town **Halewara** taluka **Etapalli** in District/Division **Gadchiroli** of the State belongs to the **Madia** tribe Sr.No. **18** which is recognized as a **Scheduled Tribe** under

#The Constitution (Scheduled Tribes) Order, 1950

[As amended by The Scheduled Castes/ Scheduled Tribes Lists (Modification) Order, 1956, The Bombay Reorganisation Act, 1960]

#The Constitution Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1976 (No.108 of 1976).

#The Constitution Scheduled Castes and Scheduled Tribes Order(Amendment) Act, 2002 (No.10 of 2003).

2. Shri/Shrimati/Kumari **Bajirao Mura Halami** and/or his family ordinarily reside(s) in Village/Town **Halewara** taluka **Etapalli**, of **Gadchiroli** District/Division of the State of Maharashtra.

Applicable to the Migrants within the Maharashtra State.

(Applicable in the case of Scheduled Tribes persons who have migrated from one District to another District within the Maharashtra State.)

~~3. This certificate is issued on the basis of the Scheduled Tribe Certificate issued to Shri/Shrimati _____ _____ of Shri/Shrimati/Kumari _____ of Village/Town _____ taluka _____ in District/Division _____ of _____ who belongs to the _____ Tribe which is recognized as a _____ in the _____ issued by the _____ vide their No. _____ dated _____~~

Signature valid

Digitally Signed by Shubham Gupta

Date:2021-08-31 7:05:58 PM

Place : Etapalli

Date : 24/08/2021

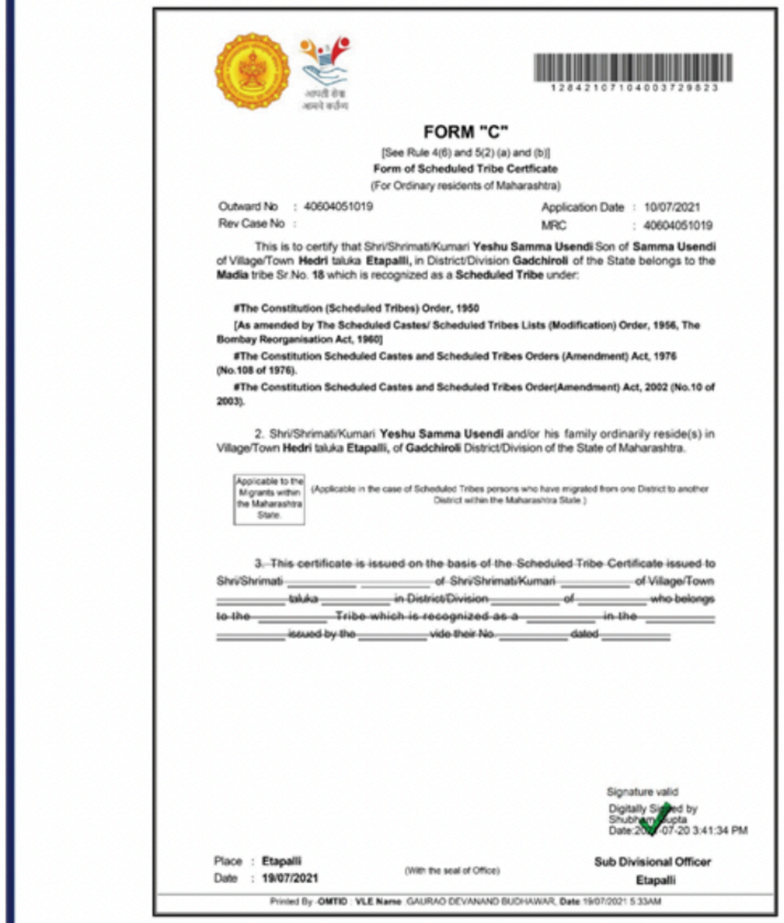
(With the seal of Office)

Sub Divisional Officer

Etapalli

Printed By -**OMTID** : **VLE Name** :SHUBHAM RAMESH WANNAMWAR, **Date**:24/08/2021 11:30AM

Caste certificate generated by MahaOnline portal



1284210710400372982 3

FORM "C"

[See Rule 4(6) and 5(2) (a) and (b)]

Form of Scheduled Tribe Certficate

(For Ordinary residents of Maharashtra)

Outward No : 40604051019 Application Date : 10/07/2021

Rev Case No : MRC : 40604051019

This is to certify that Shri/Shrimati/Kumari **Yeshu Samma Usendi** Son of **Samma Usendi** of Village/Town **Hedri** taluka **Etapalli**, in District/Division **Gadchiroli** of the State belongs to the **Madia** tribe Sr.No. **18** which is recognized as a **Scheduled Tribe** under:

#The Constitution (Scheduled Tribes) Order, 1950

[As amended by The Scheduled Castes/ Scheduled Tribes Lists (Modification) Order, 1956, The Bombay Reorganisation Act, 1960]

#The Constitution Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1976 (No.108 of 1976).

#The Constitution Scheduled Castes and Scheduled Tribes Order(Amendment) Act, 2002 (No.10 of 2003).

2. Shri/Shrimati/Kumari **Yeshu Samma Usendi** and/or his family ordinarily reside(s) in Village/Town **Hedri** taluka **Etapalli**, of **Gadchiroli** District/Division of the State of Maharashtra.

Applicable to the Migrants within the Maharashtra State.

(Applicable in the case of Scheduled Tribes persons who have migrated from one District to another District within the Maharashtra State.)

~~3. This certificate is issued on the basis of the Scheduled Tribe Certificate issued to Shri/Shrimati _____ _____ of Shri/Shrimati/Kumari _____ of Village/Town _____ taluka _____ in District/Division _____ of _____ who belongs to the _____ Tribe which is recognized as a _____ in the _____ issued by the _____ vide their No. _____ dated _____~~

Signature valid

Digitally Signed by Shubham Gupta

Date:2021-07-20 3:41:34 PM

Place : Etapalli

Date : 19/07/2021

(With the seal of Office)

Sub Divisional Officer

Etapalli

Printed By -**OMTID** : **VLE Name** :GAURAO DEVANAND BUDHAWAR, **Date**:19/07/2021 5:33AM

This is a blockchain-anchored caste certificate

INSTRUCTIONS TO VERIFY

1. Visit https://gadchiroli.gov.in/etapalli.
2. Scan this QR code by clicking "SCAN TO VERIFY."
3. Ensure the details shown on the portal matches with the certificate.

Powered by LegitDoc®

Corresponding blockchain caste certificate generated by LegitDoc

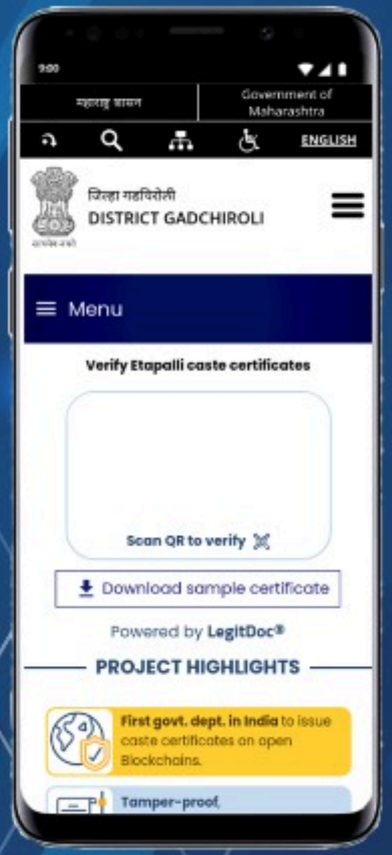
Verification DApp

- Verification DApp is hosted on the Gadchiroli district administration website (by NIC). The process of verification is done within a matter of 10 seconds!

  The verification DApp will:

- Step 1: Read entries (both certificate data and blockchain data) from the QR code
- Step 2: Progressively hash all certificate data entries to arrive at the final hash
- Step 3: Check the availability and validity of the final hash on the smart contract using the blockchain data
- Step 4: If the final hash is found to be valid on the blockchain, display the fields fetched from the QR code to the user so that he/she can cross verify the fields shown on the screen with that of the caste certificate

Etapalli caste certificates can be verified on Gadchiroli district website with a simple QR scan



https://gadchiroli.gov.in/etapalli/

Form- 6

Rule No. 5(6) and 6(1)(a)

FORM OF CASTE CERTIFICATE FOR PERSON BELONGING TO SCHEDULED CASTE

(For Ordinary residents of Maharashtra)

CASTE CERTIFICATE

Outward No : 40604061319 Application Date : 27/12/2021

Raw Case No : MRC : 40604061319

This is to certify that Shri/Shrimati/Kumari **Shankar Bhanu Kumbhare** Son of Shri/Shrimati **Bhanu Kumbhare** of Village/Town **Parsalgondi** taluka **Etapalli**, in District/Division **Gadchiroli** of the State of Maharashtra belongs to the **Mahar** caste Sr.No. 37 which is recognized as a **Scheduled Caste** under:

#The Constitution (Scheduled Castes) Order,1956.
#The Constitution (Scheduled Tribes) Order, 1950.
#The Constitution (Scheduled Castes) (Union Territories) Order, 1951.
#The Constitution (Scheduled Tribes) (Union Territories) Order, 1951.
(As amended by the Scheduled Castes and Scheduled Tribes lists (Modification) order, 1956 the Bombay Reorganisation Act, 1960, the Punjab Reorganisation Act, 1966, the State of Himachal Pradesh Act, 1970, the North-Eastern Areas(Reorganisation) Act, 1971 and the Scheduled Castes and Scheduled Tribes Orders(Amendment) Act, 1976).
#The Constitution (Jammu and Kashmir) Scheduled castes Order, 1956.
#The Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959 as amended by the Scheduled Castes and Scheduled Tribes Orders(Amendment) Act, 1976.
#The Constitution (Dadra and nagar Haveli) Scheduled Castes Order, 1962.
#The Constitution (Dadra and nagar Haveli) Scheduled Tribes Order, 1962.
#The Constitution (Pondicherry) Scheduled Castes Order, 1964.
#The Constitution (Scheduled Tribes) (Uttar Pradesh) Order, 1967.
#The Constitution (Goa, Daman, Diu) Scheduled Castes Order, 1968.
#The Constitution (Goa, Daman, Diu) Scheduled Tribes Order, 1968.
#The Constitution (Nagaland) Scheduled Tribes Order, 1970.
#The Constitution (Sikkim) Scheduled Castes Order, 1970.
#The Constitution (Sikkim) Scheduled Tribes Order, 1970.

Shri/Shrimati/Kumari **Shankar Bhanu Kumbhare** and/ or his family ordinarily resides(s) in Village/Town **Parsalgondi** Tehsil **Etapalli** in the District/Division **Gadchiroli** of the State Maharashtra.

Digitally Signed by
Date: 28/12/21 7:19:00 PM

Place : Etapalli
Date : 28/12/2021

(Name and Designation of Officer)
Sub Divisional Officer
Etapalli

Old caste certificate

Form- 6

Rule No. 5(6) and 6(1)(a)

FORM OF CASTE CERTIFICATE FOR PERSON BELONGING TO SCHEDULED CASTE

(For Ordinary residents of Maharashtra)

CASTE CERTIFICATE

Outward No : 40604061319 Application Date : 27/12/2021

Raw Case No : MRC : 40604061319

This is to certify that Shri/Shrimati/Kumari **Shankar Bhanu Kumbhare** Son of Shri/Shrimati **Bhanu Kumbhare** of Village/Town **Parsalgondi** taluka **Etapalli**, in District/Division **Gadchiroli** of the State of Maharashtra belongs to the **Mahar** caste Sr.No. 37 which is recognized as a **Scheduled Caste** under:

Shri/Shrimati/Kumari **Shankar Bhanu Kumbhare** and/ or his family ordinarily resides(s) in Village/Town **Parsalgondi** Tehsil **Etapalli** in the District/Division **Gadchiroli** of the State Maharashtra.

Digitally Signed by
Date: 28/12/21 7:19:00 PM

Place : Etapalli
Date : 28/12/2021

(Name and Designation of Officer)
Sub Divisional Officer
Etapalli

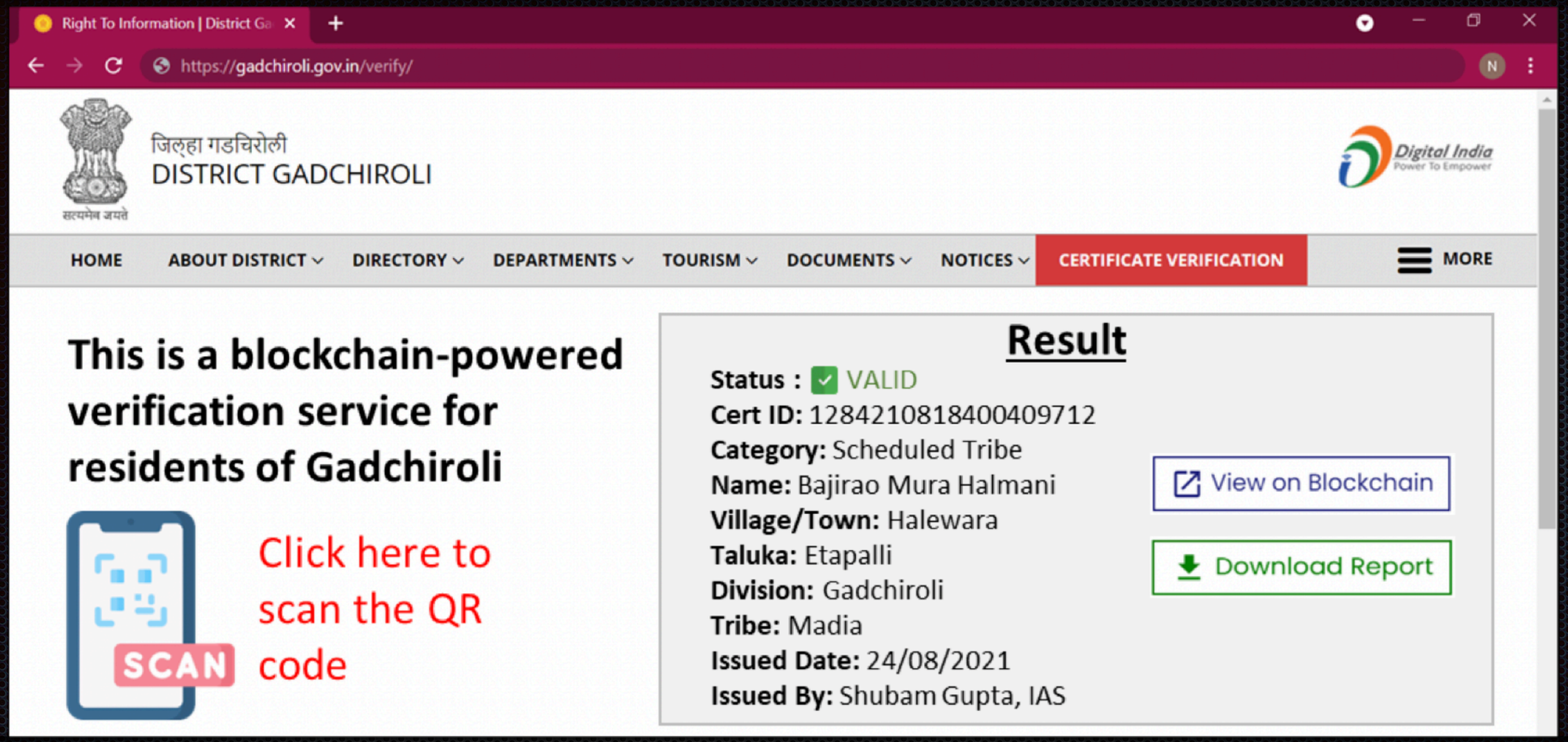
This is a blockchain-anchored caste certificate

INSTRUCTIONS TO VERIFY

1. Visit https://gadchiroli.gov.in/etapalli
2. Scan this QR code by clicking "SCAN TO VERIFY"
3. Ensure the data is shown on the portal matches with the certificate.

Powered by LegitDoc®

New blockchain based caste certificate



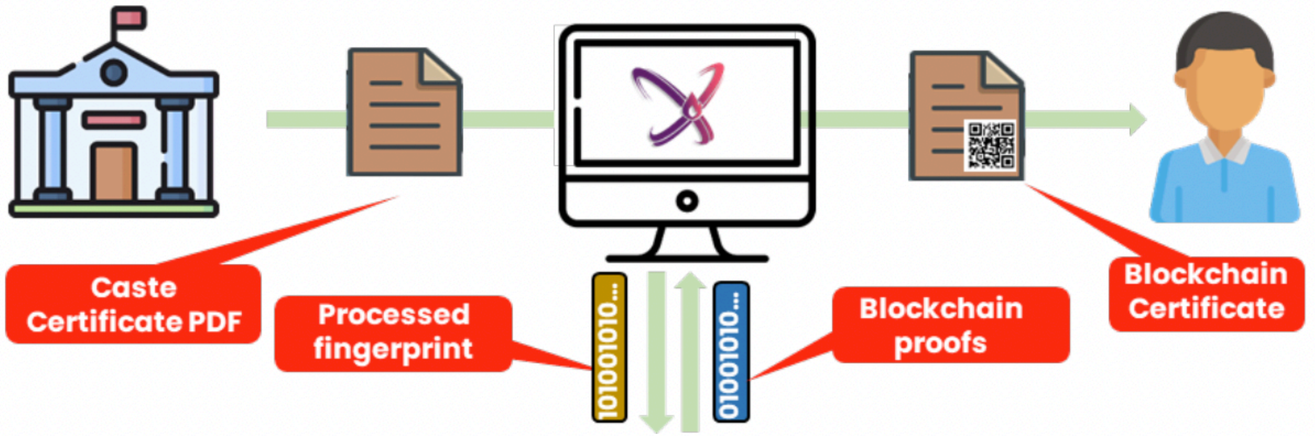
- Any tampering done by an external party to the QR code data will be immediately detected during verification since this will cause drastic changes to the final hash of the certificate data

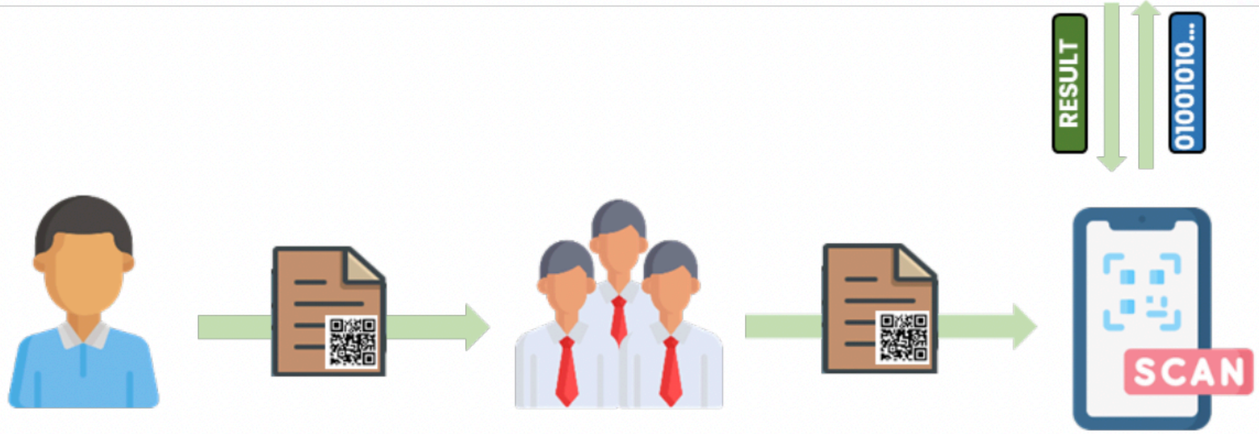
- Even if a malicious actor creates a fake caste certificate but pastes a valid QR code on it, the verifier will be able to easily detect the forgery since there'll be a mismatch between the data shown on the verification portal and the forged certificate being verified

1 SDM office generates PDF caste certificates using MahaOnline portal as usual

2 LegitDoc appends QR code to the original PDF to create blockchain-powered caste certificates

3 Blockchain-powered caste certificates can be given to district residents both in printed and digital forms





4 Etapalli residents own blockchain-powered caste certificates either in printed or digital form

5 Caste certificate owners provide either printed or digital caste certificates to interested verifiers

6 Verifiers scan the QR code on caste certificates to directly verify their validity on the district office website

Impact

- Around 65,000 blockchain based caste certificates issued (between June 2022 to December 2022)
- Beneficiary targeting for government schemes improved Only blockchain based caste certificates accepted as valid proof. Elimination of dummy beneficiaries
- Third party verification made simpler and efficient. Around 25% reduction in number of third party offline requests
- Model adopted by Dumka district in Jharkhand and state government in Chattisgarh

Blockchain caste certificate project has put Etapalli(Gadchiroli) on the world Map!

COINTELEGRAPH
The future of money

Indian state gov't uses Polygon to issue verifiable caste certificates

In partnership with LegitDoc, the Maharashtra government is in the process of rolling out 65,000 caste certificates to aid the process of delivering governmental schemes and benefits.

anue 鉅亨

印度Maharashtra地區通過Polygon頒發了6.5萬份種姓證書

金色財經 2022/03/30 14:30

Tag 種姓 證書 maharashtra polygon gadchiroli

3月30日消息，位於印度 Maharashtra 的 Gadchiroli 區政府已經通過 Polygon 區塊鏈上的文件驗證系統 LegitDoc 為 65,000 個種姓證書蓋章。Gadchiroli 區政府希望其採用區塊鏈技術可以打擊通過偽造種姓證書進行的欺詐行為。在印度，一些部落和邊緣社區使用種姓證書來獲得某些政府福利和補貼。種姓制度在印度是一種嚴格的社會等級制度，低種姓通常代表着弱勢和貧困的社會。Gadchiroli 地區已開始在線頒發證書，其驗證 Polygon 區塊鏈上文件有效性的門戶於周二上線。據介紹，該項目是「數字印度」計劃的一部分，旨在研究鏈上電子政務，如果成功，將在 Maharashtra 推廣。（Forkast）

THE ECRYPTING STORY

Maharashtra govt ties up with Polygon based platform LegitDoc to issue caste certificates

By Prathiksha BU | March 30, 2022

BusinessLine

Gadchiroli uses blockchain caste certificates to deter forgery

VATTI SONI
Bengaluru, March 31

Bengaluru-based LegitDoc is powering a Maharashtra government initiative to issue 65,000 blockchain caste certificates in Gadchiroli district, which has about 70 per cent tribal population.

The caste certificates are produced on blockchain to deter any forgery. Even though Maharashtra has an online platform to issue the caste certificates, the majority of the population holds these certificates — used to secure reserved posts or special facilities — in the physical form, which can prove challenging to authenticate and verify.

Speaking to *BusinessLine* on the need for this initiative, Shubham Gupta, an IAS officer working in Gadchiroli district, said: "I worked in Nashik earlier, and handled a case in which someone had falsified a caste certificate and got tribal land transferred to his name. So, when I came here (Gadchiroli district) and noticed that the majority (70 per cent) population belonged to a scheduled tribe (ST), I wanted to do something pre-emptively."

Population of Gadchiroli

With a population of 11 million Gadchiroli has been declared an aspirational district by NITI Aayog.

LegitDoc will cryptographically commit selective details of every caste certificate from the 'MahaOnline' portal on the polygon POS blockchain and generate a unique QR code. These QR codes will consist of blockchain-proofs, which can be embedded on the certificate. Anyone who wants to cross-check can go to the verification portal on the district website and scan the QR code. The verification process takes less than ten seconds.

Talking about the project, Neil Matris, co-founder of LegitDoc, said: "While other governments have run private blockchain pilots for securing land records, this is the first instance of an e-governance initiative being run on a public blockchain network."

In the case of issuing caste certificates, there is a single issuer (like sub-division officer) and unknown number of participants such as document any single authority, and holds the highest form of immutability and censorship resistance.

LegitDoc is the flagship product developed by Crossforge Solutions Private Limited. The company was founded by Matris, Francis Serrao and Shesha Vishnu Prasad in 2018, as a part-time project, but has been operating as a full-fledged venture since

The Indian EXPRESS

Friday, April 08, 2022

Maharashtra to use Polygon blockchain to issue verifiable caste certificates

The Gadchiroli administration aims to target 1.1 million economically challenged residents of the district through verifiable caste certificates.

moneycontrol

Home > News > BUSINESS

This Maharashtra district will use blockchain to authenticate caste certificates

The blockchain project is the first of its kind in India and will help to rule out any duplication or forgery of caste certificates.

MONEYCONTROL NEWS | APRIL 04, 2022 / 12:15 PM IST

BusinessToday.In

News / Crypto / Maharashtra's Gadchiroli to issue caste certificates via blockchain platform Polygon

Maharashtra's Gadchiroli to issue caste certificates via blockchain platform Polygon

Gadchiroli district will issue caste certificates via LegitDoc, a polygon public blockchain-based platform.

LegitDoc platform is a polygon public blockchain based platform, which makes certificates instantaneously verifiable. (Photo:LegitDoc)

Outlook

Maharashtra Village To Issue Caste Certificates Via Polygon Blockchain; Cryptos Fall

Maharashtra village Etapalli to use Legit-Doc, a Polygon blockchain-based platform, to issue caste certificates. Meanwhile a school in Dubai is set to accept cryptos as a payment mechanism.

Recognised in 75 best practices in India, jointly by NITI Aayog and UNDP

NITI Aayog
@NITIAayog

#NITIAayog & @UNDP_India launched a compendium on Best Practices in Social Sector: 2023, showcasing 75 best practices across sectors from all States/UTs & 30 #GoI Ministries. It highlights innovative, sustainable & replicable models across 14 sectors.

🔗: niti.gov.in/sites/default/...

PMO India and 9 others

20:24 · 01/05/23 from Earth · **22.5K** Views

(E-governance and digitization)

Government of India

e. Akanksha: An integrated online platform for SDG and CSR alignment — 149
Department of Planning, Programme Monitoring and Statistics, Government of Karnataka

f. DigiLocker — 151
Ministry of Electronics and Information Technology, Government of India

g. Blockchain based caste certificates — 154
District Administration, Gadchiroli, Government of Maharashtra

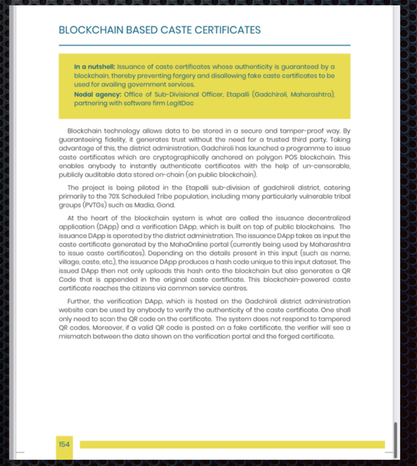
h. Infrastructure Snapshot App, Goalpara — 157
District Administration, Goalpara, Government of Assam

i. Loksewak App: E-Attendance Application, Khandwa — 160
District Administration, Khandwa, Government of Madhya Pradesh

11. Women's empowerment — 163

a. Navchetna Bakery - Livelihood Generation — 164
District Administration, Dhantewada, Government of Chhattisgarh

b. Aabha Sakhis in Madhya Pradesh–encouraging people to take legal electricity connections, Madhya Pradesh — 166



BLOCKCHAIN BASED CASTE CERTIFICATES

In a nutshell: Issuance of caste certificates whose authenticity is guaranteed by a blockchain, thereby preventing forgery and disallowing fake caste certificates to be used for availing government services.
Nodal agency: Office of Sub-Divisional Officer, Etapalli (Gadchiroli, Maharashtra), partnering with software firm LegitDoc

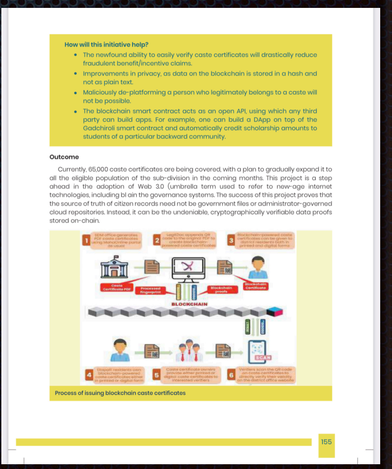
Blockchain technology allows data to be stored in a secure and tamper-proof way. By guaranteeing fidelity, it generates trust without the need for a trusted third party. Taking advantage of this, the district administration, Gadchiroli has launched a programme to issue caste certificates which are cryptographically anchored on polygon POS blockchain. This enables anybody to instantly authenticate certificates with the help of un-censorable, publicly auditable data stored on-chain (on public blockchain).

The project is being piloted in the Etapalli sub-division of gadchiroli district, catering primarily to the 701 Scheduled Tribe population, including many particularly vulnerable tribal groups (PVTGs) such as Madia, Gond.

At the heart of the blockchain system is what are called the issuance decentralized application (DApp) and a verification DApp, which is built on top of public blockchains. The issuance DApp is operated by the district administration. The issuance DApp takes as input the caste certificate generated by the MahaOnline portal (currently being used by Maharashtra to issue caste certificates). Depending on the details present in this input, (such as name, village, caste, etc.), the issuance DApp produces a hash code unique to this input dataset. The issued DApp then not only uploads this hash onto the blockchain but also generates a QR Code that is appended in the original caste certificate. This blockchain-powered caste certificate reaches the citizens via common service centres.

Further, the verification DApp, which is hosted on the Gadchiroli district administration website can be used by anybody to verify the authenticity of the caste certificate. One shall only need to scan the QR code on the certificate. The system does not respond to tampered QR codes. Moreover, if a valid QR code is pasted on a fake certificate, the verifier will see a mismatch between the data shown on the verification portal and the forged certificate.

154



How will this initiative help?

- The newfound ability to easily verify caste certificates will drastically reduce fraudulent benefit/incentive claims.
- Improvements in privacy, as data on the blockchain is stored in a hash and not as plain text.
- Maliciously de-platforming a person who legitimately belongs to a caste will not be possible.
- The blockchain smart contract acts as an open API, using which any third party can build apps. For example, one can build a DApp on top of the Gadchiroli smart contract and automatically credit scholarship amounts to students of a particular backward community.

Outcome

Currently, 65,000 caste certificates are being covered, with a plan to gradually expand it to all the eligible population of the sub-division in the coming months. This project is a step ahead in the adoption of Web 3.0 (umbrella term used to refer to new-age internet technologies, including bl ain the governance systems. The success of this project proves that the source of truth of citizen records need not be government files or administrator-governed cloud repositories. Instead, it can be the undeniable, cryptographically verifiable data proofs stored on-chain.

Process of issuing blockchain caste certificates

155

“Source of truth for citizen records will no longer be the dusty files racked in Government offices or the administrator governed data on cloud repositories. Instead, it’ll be the undeniable, cryptographically verifiable data proofs stored on-chain”

Artificial Intelligence

implementation in field administration

Nutrition Traceability and Impact Assessment

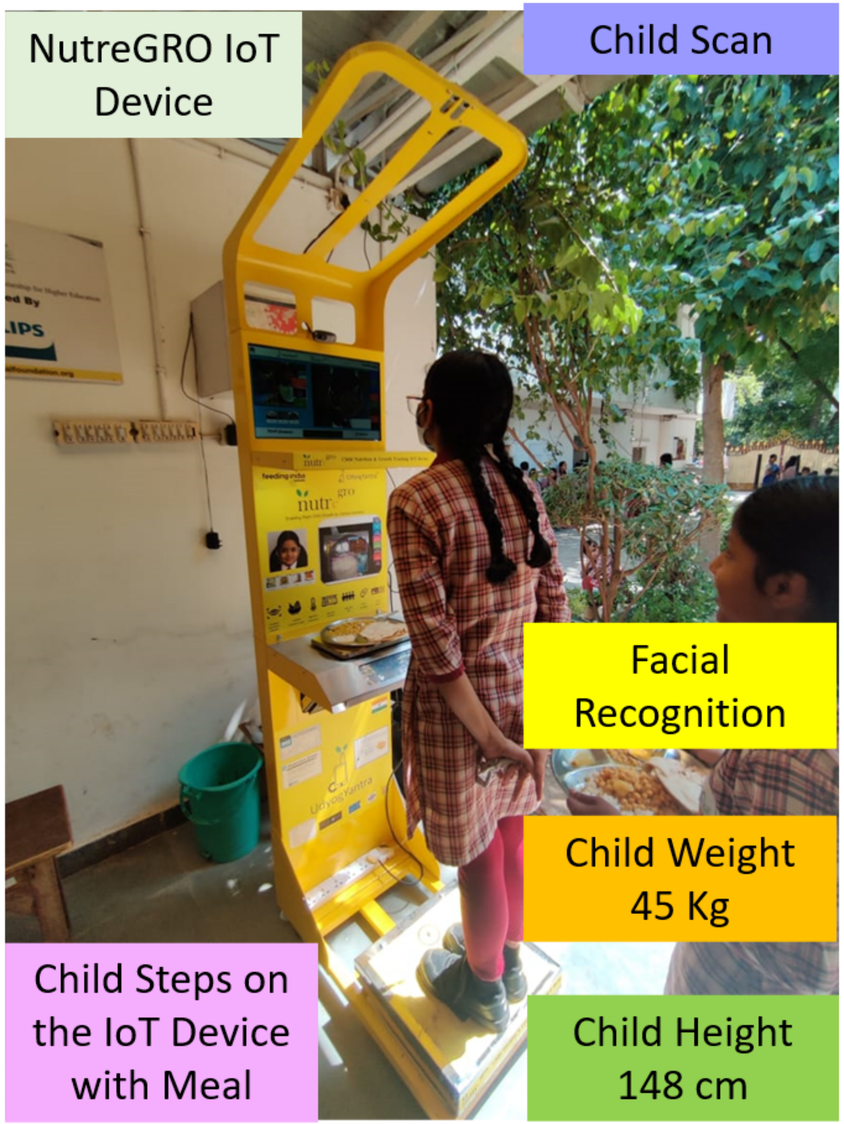
BRIEF INFORMATORY VIDEO OF THE PROJECT

https://drive.google.com/file/d/19EKzz_OW16kUv5A6494sJkyyTJXQLg3h/view?usp=drive_link

Delivering quality meals using artificial intelligence

NutreGRO IoT Device

Child Scan



Facial Recognition

Child Weight 45 Kg

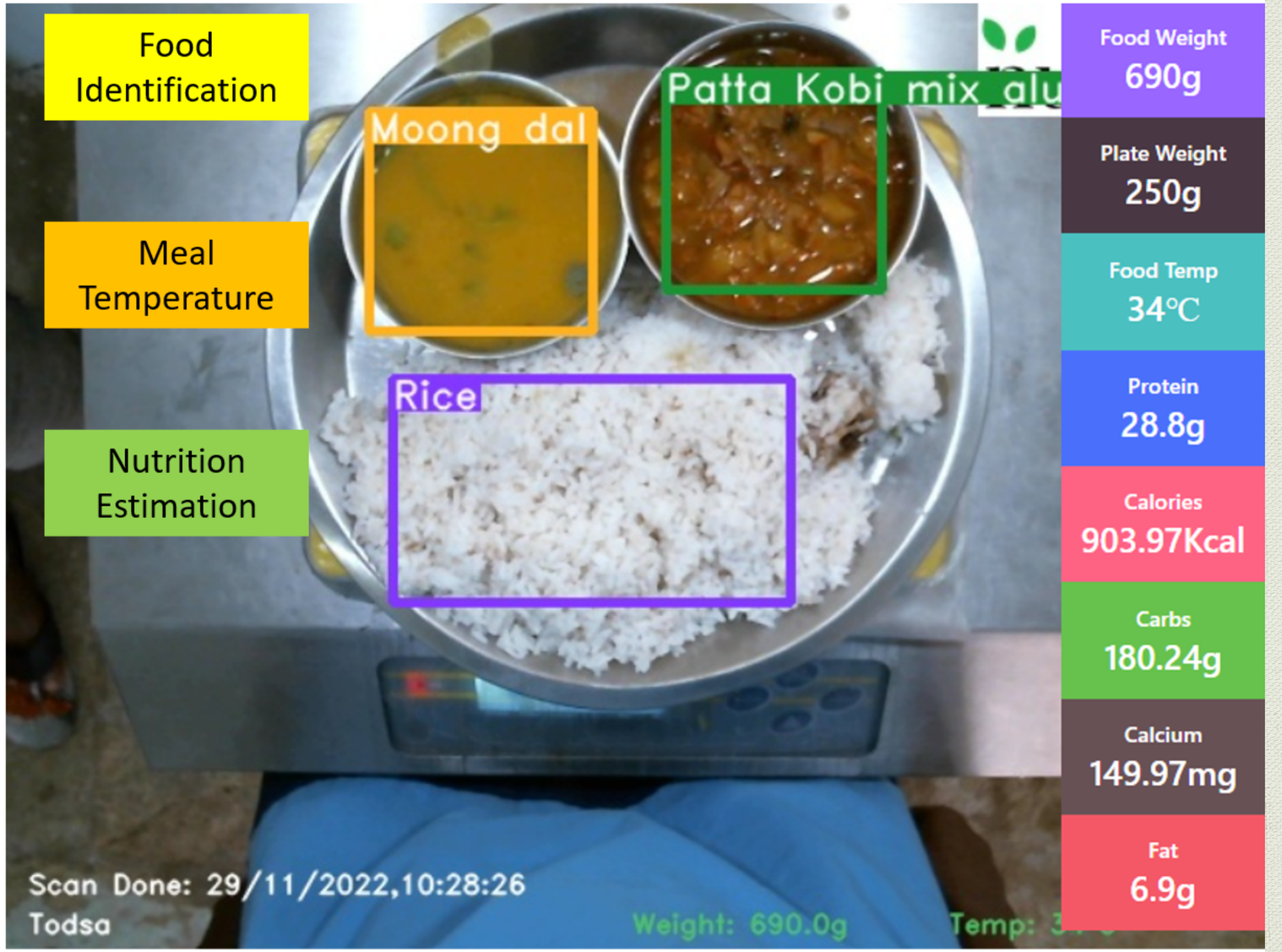
Child Steps on the IoT Device with Meal

Child Height 148 cm

Food Identification

Meal Temperature

Nutrition Estimation



Food Weight 690g

Plate Weight 250g

Food Temp 34°C

Protein 28.8g

Calories 903.97Kcal

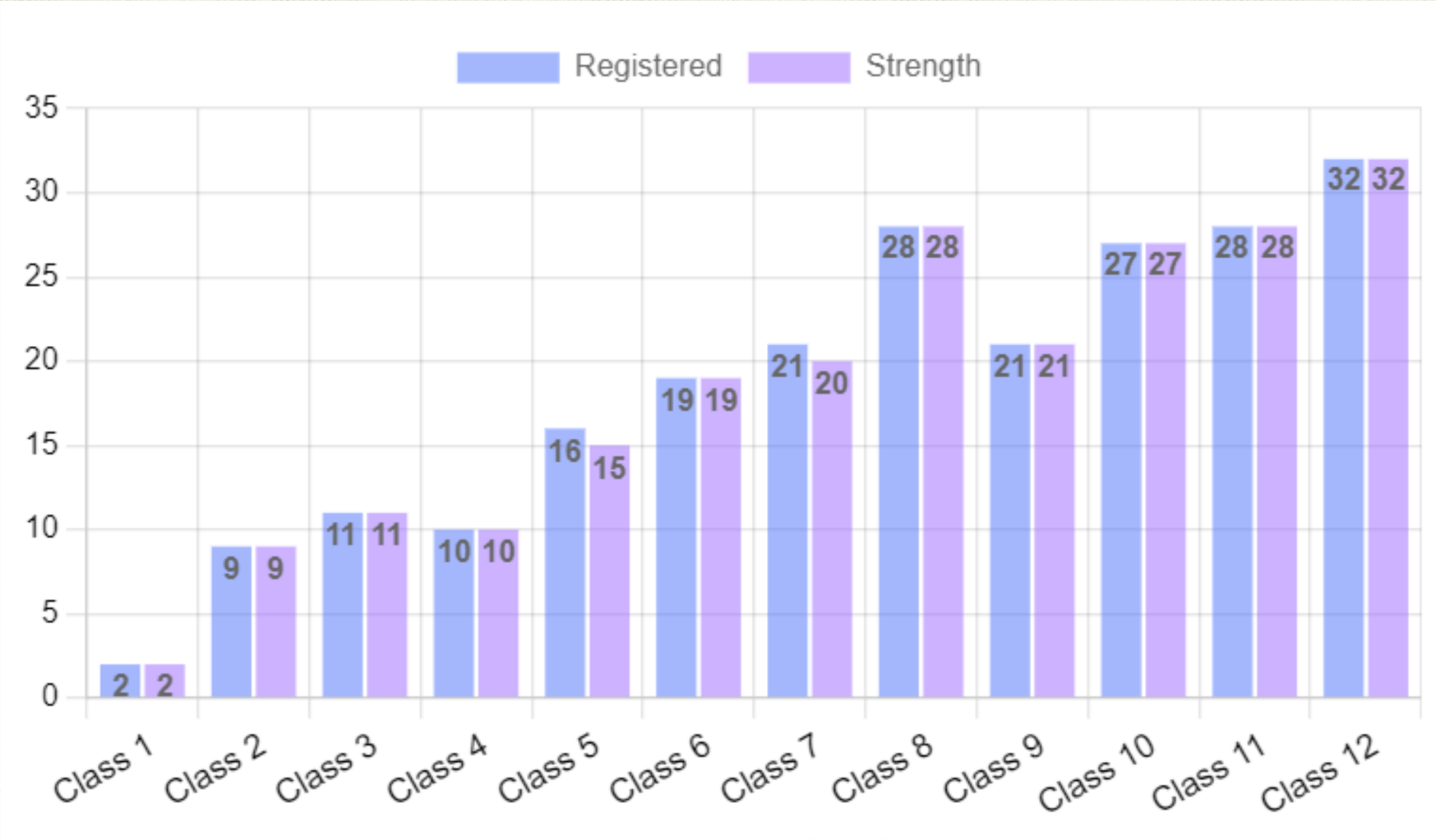
Carbs 180.24g

Calcium 149.97mg

Fat 6.9g

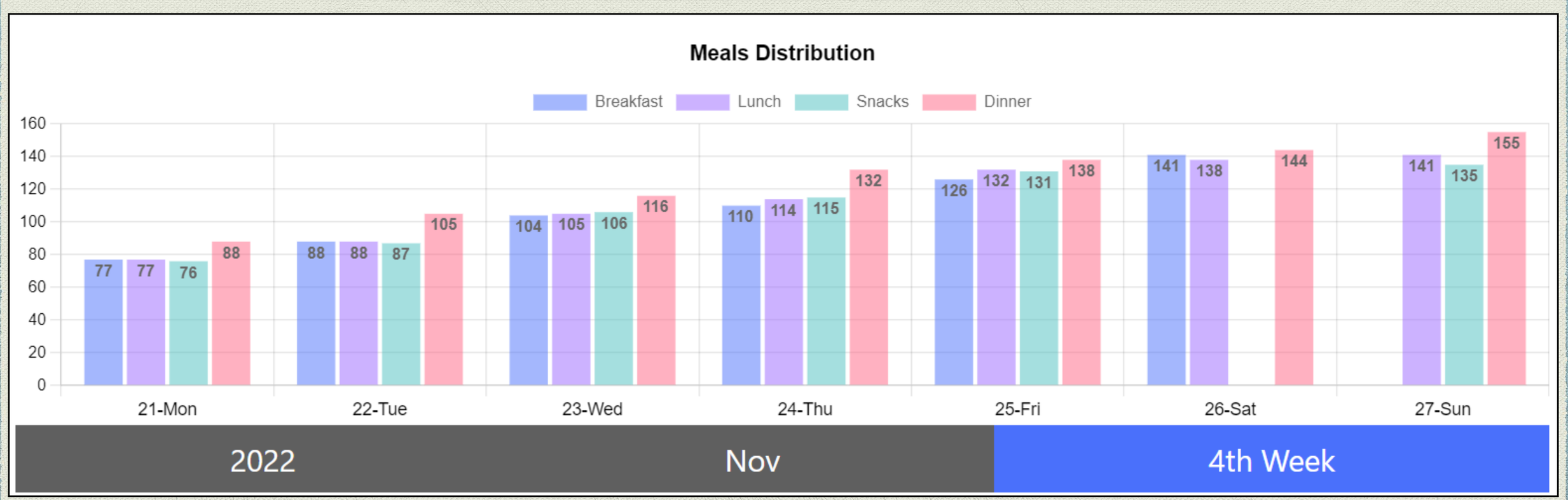
PREVENTION OF DUPLICITY IN MEALS: FACIAL RECOGNITION BASED ATTENDANCE

DAILY MEAL REPORT FOR 222 STUDENTS



Objective 1 : Tracking Actual Meals Served

222 Students



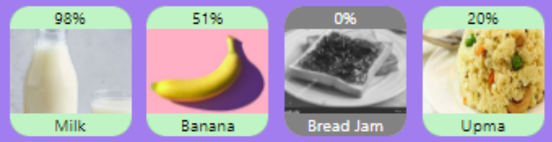
Objective 2 : Menu Compliance

Meal Compliance

Total Meals Served	610
Total Times Meals Served	2
Average Temp	47.05℃

Total Items Served	6
Planned Items Served	3
Unplanned Items Served	2

Breakfast Compliance



Total Meals Served	103
Average Temp	35.0℃

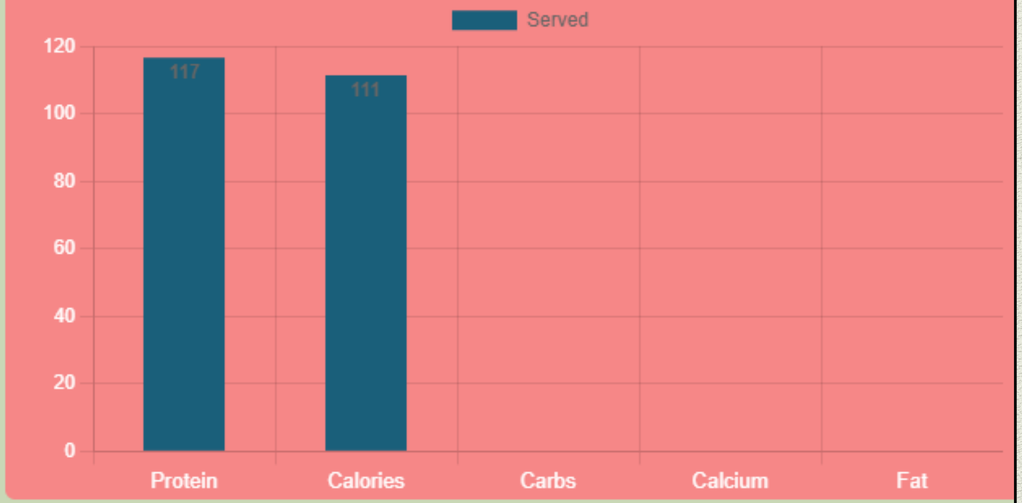
Total Items Served	3
Planned Items Served	2
Unplanned Items Served	1

Lunch Compliance

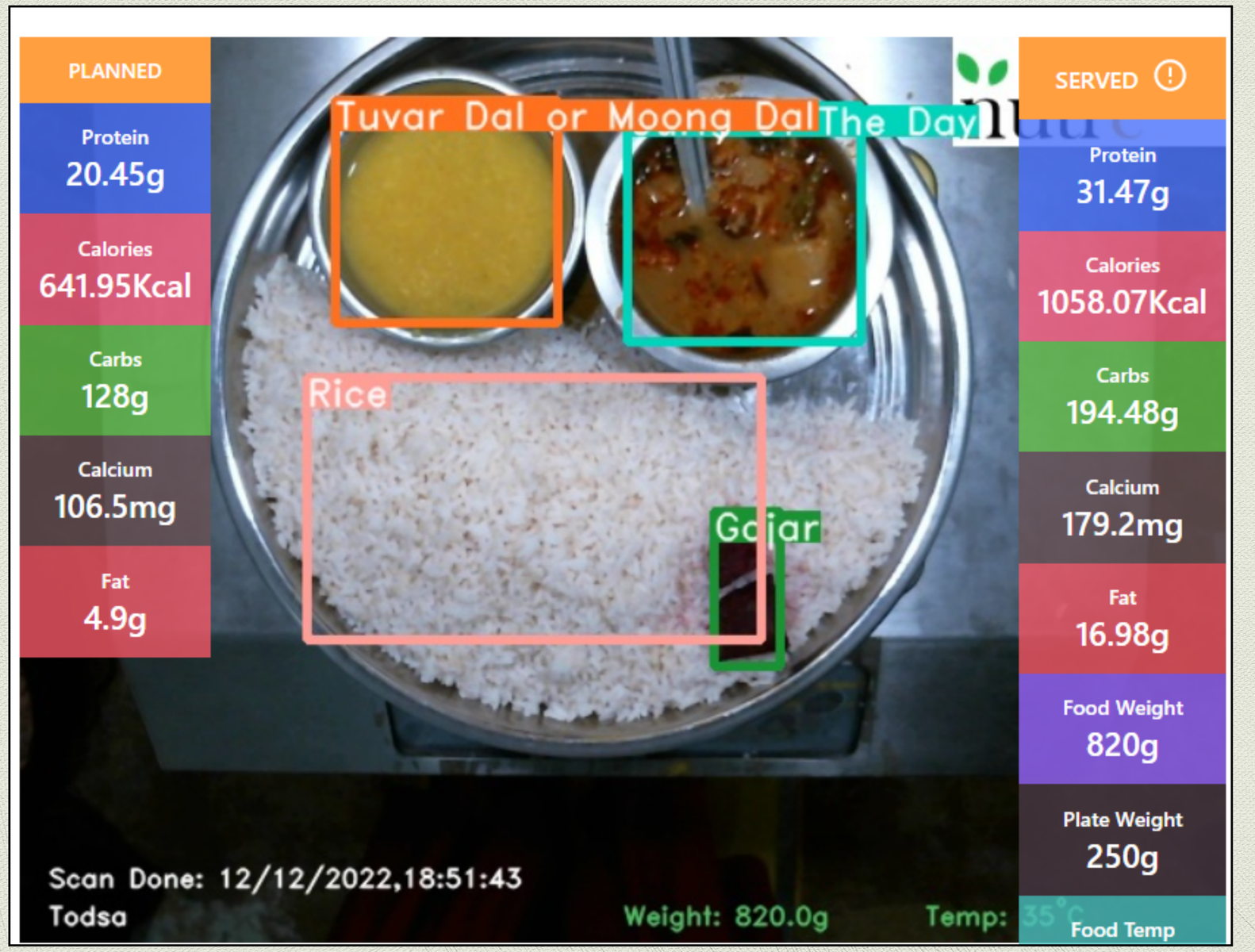
Total Meals Served	507
Average Temp	50.0℃

Total Items Served	3
Planned Items Served	1
Unplanned Items Served	1

Average Nutrients of the day (%)

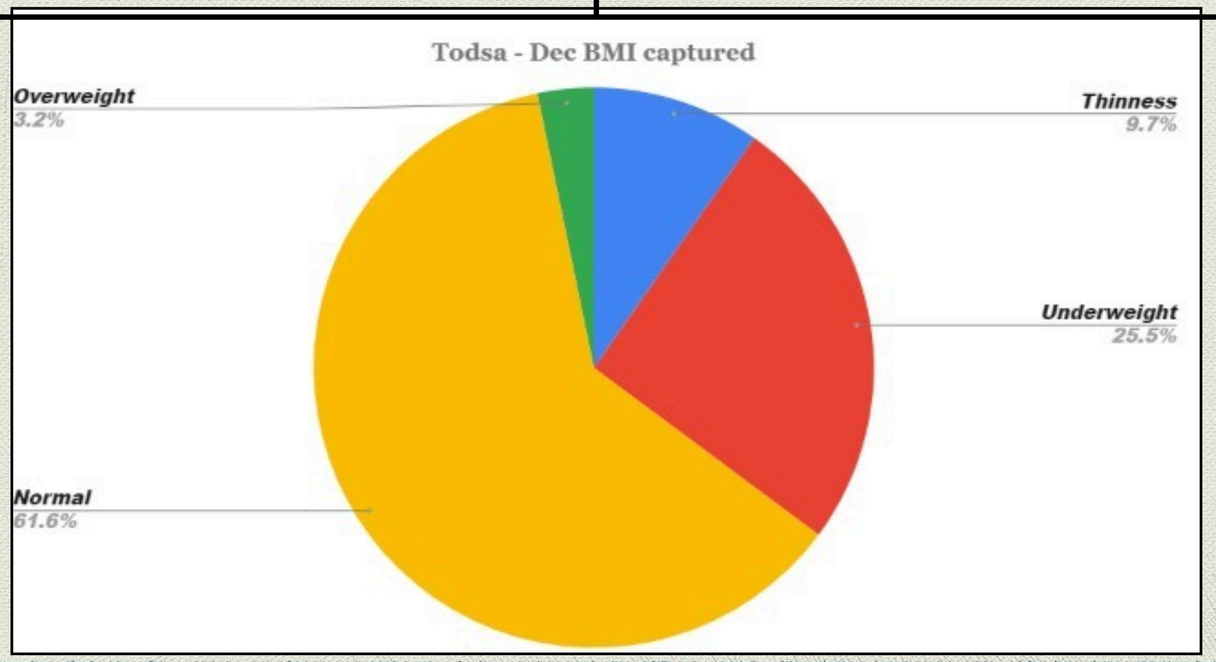


Objective 3 : Nutrition Tracking with Every Meal



Objective 4 : BMI tracking (Underweight, Normal, Overweight & Obese)

BMI / Growth	Todsa
Thinness	10%
Underweight	25%
Normal	62%
Overweight	3%
Obese	0%



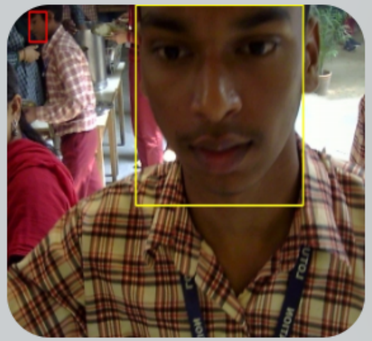
Objective 5 : Nutrition and Health Report Card for All Students

nutre gro

HEALTH REPORT CARD

Nov 2022

feeding india | LOTUS PETAL FOUNDATION



Admission no.: 1119

Name: Anauj Kumar

Class: 10

Gender: M

DOB: 15-09-2005

BMI: 21.6 kg / m^2

Weight: 63.16 kg

Height: 171 cm

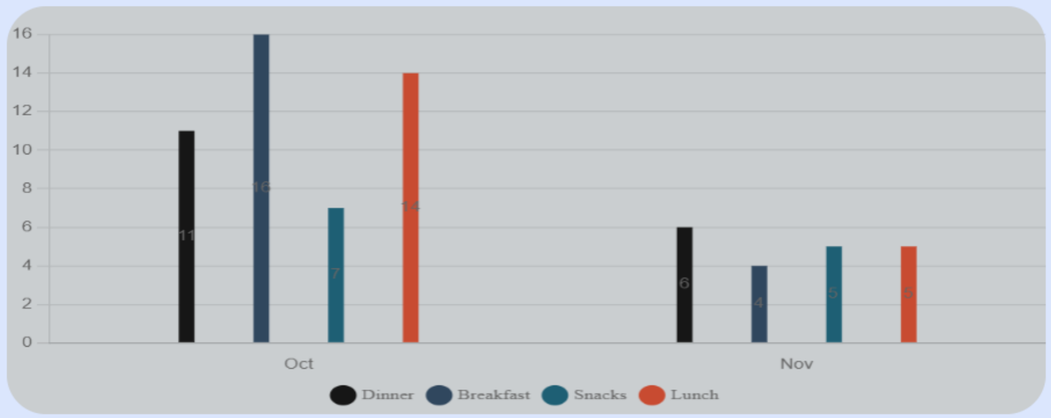
Total Meal (per month): 27

BMI Type: NORMAL

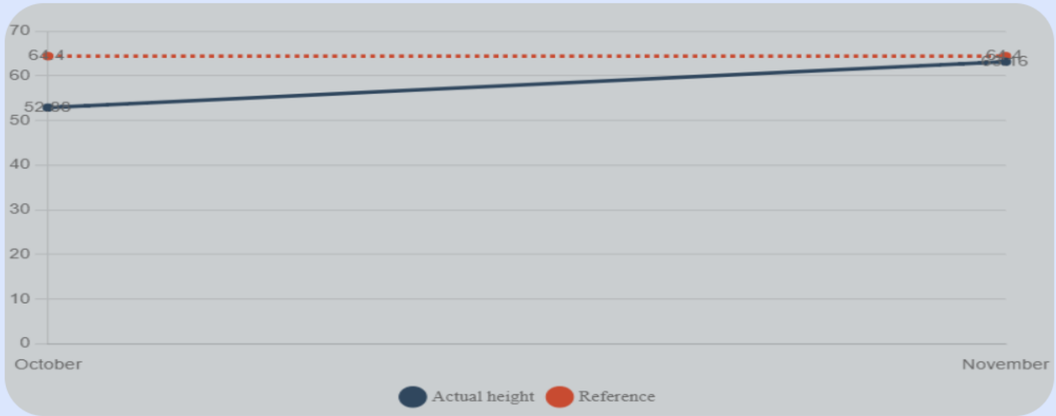
AGE AND GENDER WISE BMI CHART

THINNESS	< 15.6
UNDERWEIGHT	15.6 to 17.1
NORMAL	17.1 to 24.6
OVERWEIGHT	24.6 to 35.3
OBESE	> 35.3

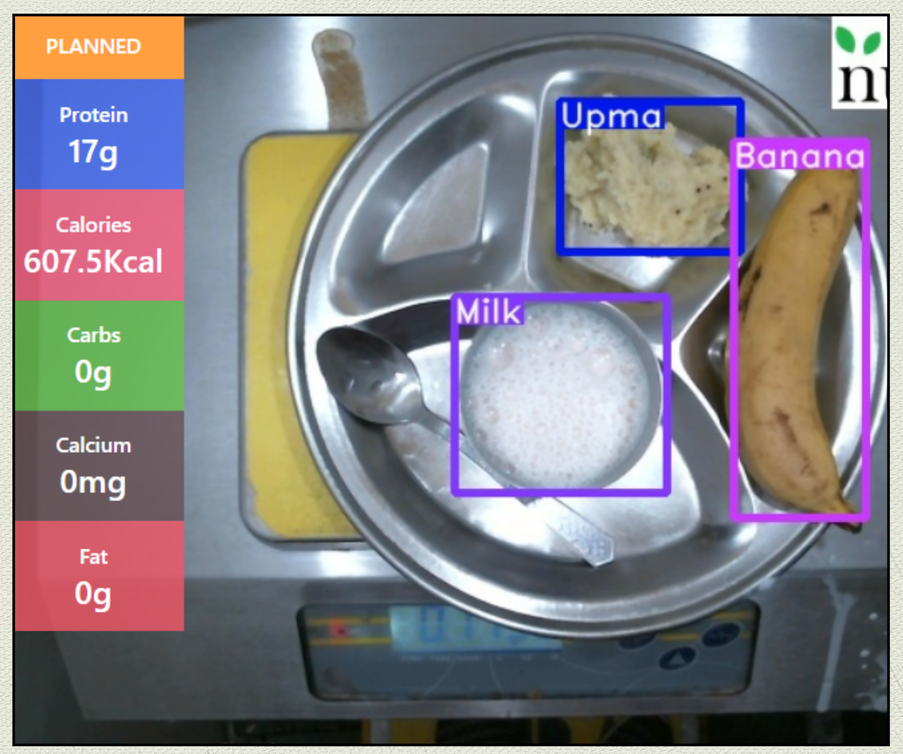
MONTHLY MEAL COUNT



WEIGHT CHART



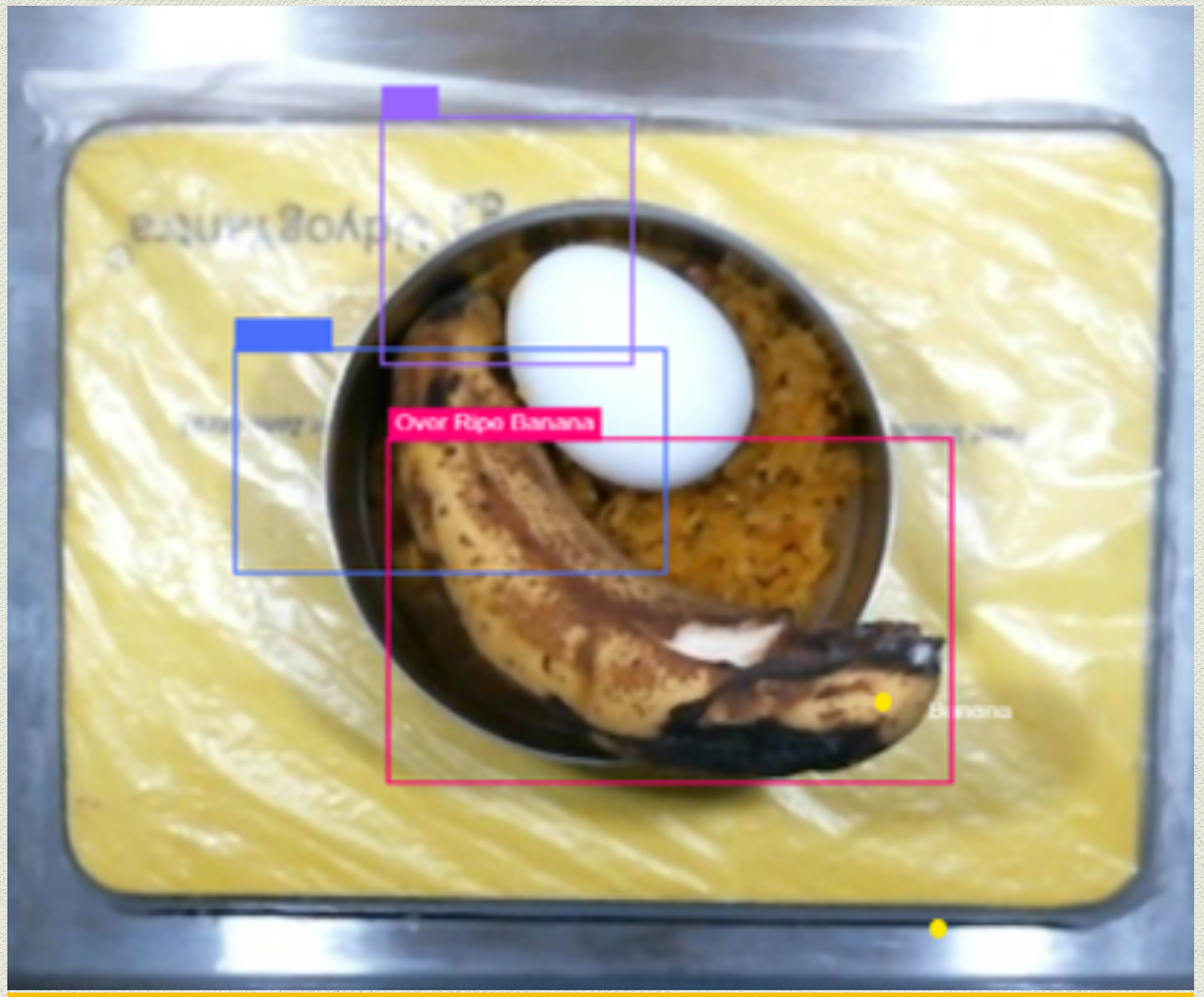
Objective 6 : Nutrition vs BMI correlation (to do targeted Nutrition Delivery)



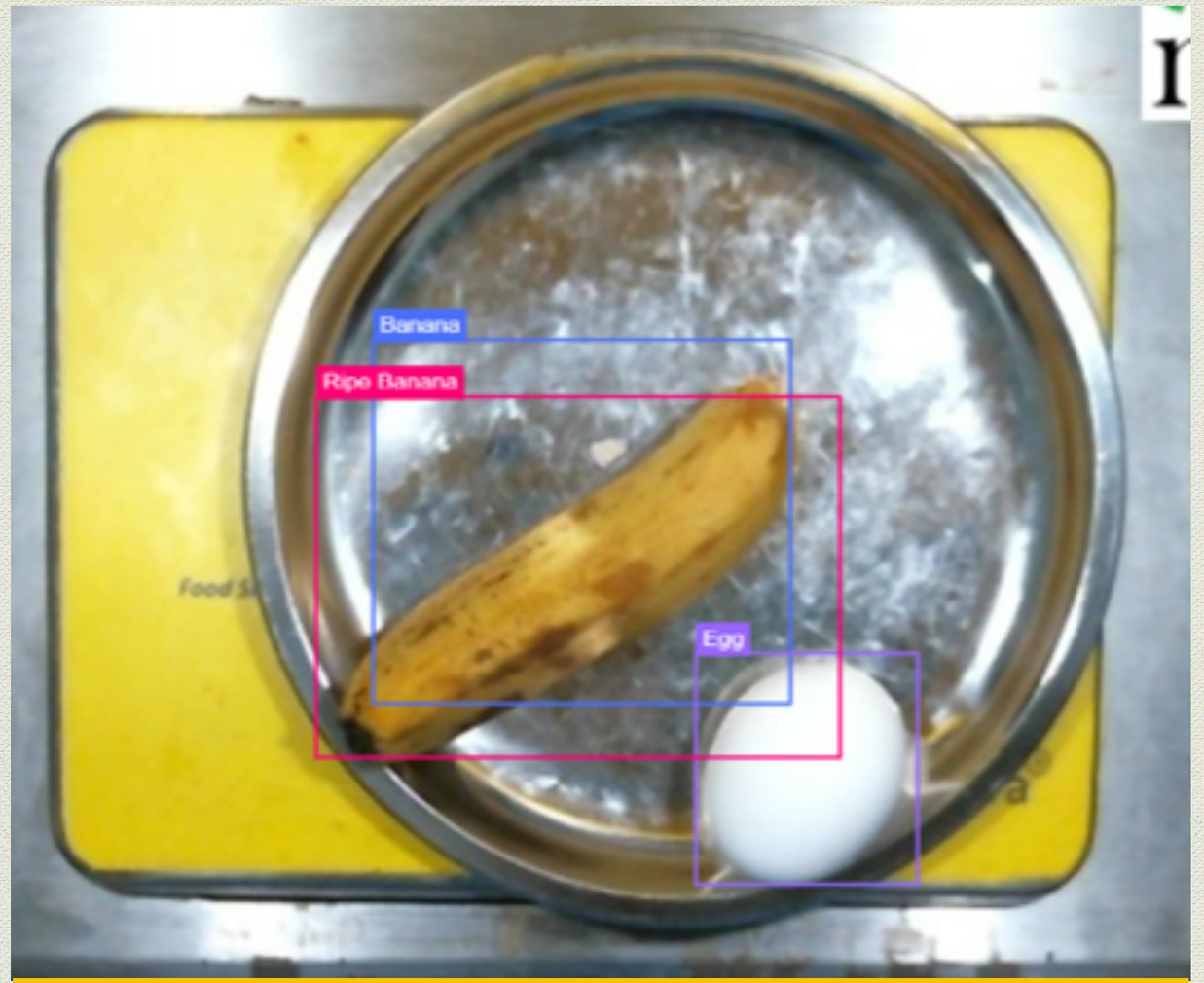
MEAL CONSUMPTION TABLE

MEAL TIME	FOOD TAKEN	MEAL TYPE	FOOD WEIGHT (gm)	FOOD TEMP (c)	CALORIES (kcal)	CARBS (gm)	CALCIUM (mg)	FATS (gm)	PROTEIN (gm)
25-11-2022 13:57:16	Chavali usal	Snacks	67	40	116	13	30	5	4
25-11-2022 18:17:23	Ulid Dal,Rice	Dinner	519	46	635	112	38	15	13
26-11-2022 07:06:53	Banana,Egg, Aloo Poha	Breakfast	210	34	419	59	31	13	11
26-11-2022 10:52:16	Tuvar Dal,Rice,Aloo Vanga	Lunch	516	63	560	105	110	7	16
26-11-2022	Louki Sabji,Rice,Tu	Dinner	560	69	608	114	120	8	17

Objective 7 : IMProvement in quality served(without direct enforcement)



October 2022



December 2022

Objective 8 : 6 seconds per meal for scanning with 93% efficiency

10 Meal Scans Per Minute
600 Scans / Hr Peak Scan Rate Achieved

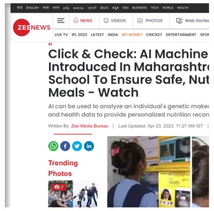
After the implementation of this project in Todsa school, 40 out of 61 students escaped malnutrition and were categorised as normal.

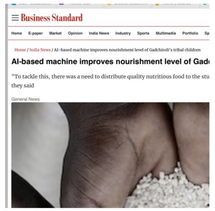
Moreover, the project's utility can be scaled up with keeping in mind the PM POSHAN (erstwhile mid day meal) scheme of Government of India implemented jointly with states with an annual outlay of around Rs. 20,000 crores.

A mobile app version (less cost intensive) with built in AI capabilities is in works for quick scale up.

All for our children to be HEALTHIER and HAPPIER!

MEDIA APPRECIATION





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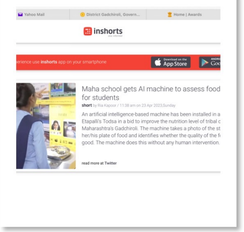
#WATCH | Maharashtra: In a bid to improve the nutrition level of tribal children of Gadchiroli, a unique Artificial Intelligence-based machine has been installed at Todsa Ashram School of Etapalli The machine takes a photo of the student with her/his plate of food and within a...

Show more



Food for thought!

Potential uses of AI in governance

- CCTV footage analysis for criminal matters, law & order as well as traffic management
- Quality assurance and maintenance of public assets and services (sewer lines, electric cables, etc.)
- Efficient utilisation of available resources such as energy (demand and supply balance)
- Marking exam papers and personalised recommendations for revision (Imagine exam papers being checked by AI algorithm!)
- Handling disease spreads as well as individualised recommendations for potential health concerns

Powered by e-Governance!