**Secure Civic Data Collection and Verification Platform Using AI-Based Anomaly Detection**

* Domain: Civic Services & Governance (Public Surveys & Data Security)
* Novelty: Combines real-time public survey data collection with AI-driven fraud/anomaly detection to ensure authenticity and transparency.
* Technology: Web-based platform, AI/ML for anomaly detection, Cloud database for storage, secure authentication mechanisms.

**1. Backstory**

In many parts of India, especially semi-urban and rural areas, citizens face significant challenges in accessing basic governance services such as certificate applications, waste management complaints, or infrastructure repairs.  
Our earlier work began from a personal experience in our native village, where people had to travel long distances or rely on middlemen to process government documents.

The vision has now expanded: instead of just certificate handling, we aim to build an AI-powered governance assistant that can:

* Monitor public service delivery in real time.
* Collect citizen feedback (in their local language or dialect).
* Cross-verify official claims with independent sources.
* Trigger corrective actions instantly.

This directly addresses the widespread trust deficit in governance reporting, where published rankings or statistics do not always match on-ground reality.

**2. Survey Context & Why This Project is Needed**

**Swachh Survekshan Background**

* Annual national cleanliness survey under the Swachh Bharat Mission.
* Uses municipal data, citizen feedback, and on-ground inspections to rank cities.
* Covers multiple categories based on population size.

**Example Incidents**

**Haryana Waste Data Fudging Case**

* 81 civic bodies, including MCG & MCM, inflated waste collection stats to improve rankings.
* Reality: Some areas had only ~59% coverage.
* Lesson: Lack of real-time, independent verification allows manipulation.

**Bhubaneswar 9th Rank Controversy (2024–25)**

* Citizens posted pictures of uncollected garbage and waterlogging despite high ranking.
* Widespread criticism that rankings are “PR-driven” rather than reality-based.
* Lesson: Citizen trust erodes when official data does not match daily lived experience.

**Impact Gap**  
Current surveys are retrospective. By the time results are announced, the problems have persisted for weeks or months.

Our AI agent changes this:

* Moves from annual scoring to instant detection to instant action.
* Allows citizen feedback loops and issue tracking in real time.

**3. Societal Impact & Accessibility**

**Societal Impact**

* Transparency: Reduces manipulation in official reports by verifying data with citizen inputs and public datasets.
* Accountability: Real-time dashboards make it impossible to hide unresolved issues.
* Faster Resolution: AI automates 80% of routine complaints so officers focus on complex matters.
* Citizen Empowerment: Anyone, even without digital literacy, can report and track issues.

**Inclusivity for Illiterate Citizens**

* Voice-first Interaction: The assistant can communicate entirely via speech.
* Local Languages & Dialects: Recognises and speaks in the user’s preferred language or dialect for comfort and clarity.
* Multi-channel Access: Available via mobile app, WhatsApp, IVR calls, and SMS, ensuring accessibility even in low-connectivity areas.

**4. Novelty**

**From Static Reports to Real-Time Action**  
Existing systems like Swachh Survekshan or State Performance Index Reports (SPIR) operate retrospectively.  
Our AI agent flips the model: instead of annual reports, it enables instant issue detection, task assignment, and citizen updates.

**Multi-Source Context Awareness**  
Our system merges:

* Citizen voice, text, and image reports.
* Public datasets (e.g., Smart City Data Portal).
* CCTV and sensor feeds (where available).

This produces human-like contextual understanding but at machine speed.

**Proactive Governance**  
Predicts problems before they occur.  
Example: Analysing past monsoon flooding data to alert municipal teams weeks in advance.

**AI-Driven Transparency**  
Official reports are cross-checked against live citizen and sensor data, creating a truth layer that makes manipulation near-impossible.

**5. Unique Selling Points (USP)**

* Single Window AI for City Health: One agent that listens, detects, assigns, and updates in real time.
* Zero Human Bottleneck for Routine Issues: 80% of city governance tasks handled autonomously.
* Citizen Trust Through Live Feedback Loops: Updates similar to “food delivery tracking” for city complaints.
* Integration with National Smart City Data Portals: Leverages underutilised public datasets for better decision-making.
* Multi-Channel Interaction (Inclusivity): Works on mobile, WhatsApp, voice calls, and SMS.

**6. Quantifying the Impact**

Possible measurable metrics after deployment:

* Complaint resolution time reduced by 60–80%.
* Data manipulation cases reduced due to cross-verification layers.
* Citizen satisfaction rating improved by 40% or more in pilot areas.
* Participation rate: number of citizens submitting feedback per 1,000 population.

**7. Extra Features That Can Be Included**

* Automated Media Analysis: Monitor social media posts for civic issue detection.
* Sentiment Analysis: Prioritise high-frustration reports for faster handling.
* Geo-Heatmaps: Show hotspots of unresolved problems.
* Offline Reporting Mode: Store reports locally until internet access is available.

**8. Relevant Research Papers & Contributions**

1. **"Crowdsourcing for Urban Governance: A Case Study of Smart Cities in India"** – Int. Journal of E-Governance and Smart Cities (2021)  
   Shows citizen-sourced data improves accountability.
2. **"Data Integrity Challenges in Large-Scale Civic Surveys"** – Government Information Quarterly (2020)  
   Explains vulnerability of self-reported data and how AI can verify.
3. **"AI-Driven Public Service Monitoring Using Multimodal Data"** – IEEE Access (2022)  
   Describes combining images, text, and geospatial data for monitoring.
4. **"Inclusive Voice Interfaces for Low-Literacy Users in Public Service Applications"** – ACM CHI (2019)  
   Validates the effectiveness of voice-first multilingual governance apps.
5. **"Detecting Data Anomalies in City Service Reports Using Machine Learning"** – Procedia Computer Science (2021)  
   Provides techniques for detecting manipulated or inconsistent civic data.

**9. Reference URLs :**

i) **Haryana Waste Data Fudging Case** - [The Times of India](https://timesofindia.indiatimes.com/city/gurgaon/not-so-swachh-mcg-mcm-among-81-civic-bodies-in-haryana-that-fudged-waste-data/articleshow/122821799.cms?utm_source=chatgpt.com)

ii) **Bhubaneswar Swachh Survekshan Controversy (2024–25)** - [The Times of India](https://timesofindia.indiatimes.com/city/bhubaneswar/residents-dissatisfied-with-citys-swachh-survey-ranking/articleshow/122770541.cms?utm_source=chatgpt.com)

**10. Why This Project Makes a Difference**

This case proves the urgent need for transparent, software-based, real-time monitoring that can expose gaps and prevent fake reporting.  
It directly supports the USP by turning opaque governance into data-verified, citizen-trustworthy governance.

**Existing Systems & Platforms**

**1. Traffy Fondue (Thailand)**

* A civic engagement platform where citizens report urban issues like potholes and broken streetlights. AI categorizes and routes complaints automatically via LINE or web, with status updates for users.
* As of May 2025, over **1.37 million reports** received and **77% resolution rate**; over **865,000** issues addressed in Bangkok alone.  
  [Wikipedia](https://en.wikipedia.org/wiki/Traffy_Fondue?utm_source=chatgpt.com)

**2. Smartizen (India)**

* A multi-lingual G2C platform supporting grievance redressal, bot assistance, real-time updates, GIS-based reporting, citizen feedback, and dashboards.  
  [smartizen.in](https://www.smartizen.in/?utm_source=chatgpt.com)

**3. LocalCircles (India)**

* An online community platform for 100+ Indian smart cities, enabling real-time citizen-administration interaction, polls, and feedback campaigns.  
  [LocalCircles](https://www.localcircles.com/a/press/page/smartcities?utm_source=chatgpt.com)

**4. Action Udaipur**

* A mobile app for civic complaints, citizen participation, and local improvement campaigns. Over **5,705 complaints filed** with a **90%+ resolution rate**.  
  [smartcitiescouncil.com](https://www.smartcitiescouncil.com/article/app-makes-citizen-participation-smart-cities-mission-easier?utm_source=chatgpt.com)

**5. CitizenCOP**

* Android/iOS app for anonymous crime reporting linked with police departments in multiple Indian cities.  
  [Wikipedia](https://en.wikipedia.org/wiki/Citizen_COP?utm_source=chatgpt.com)

**6. CITYA!**

* An AI-powered smart city assistant for real-time information, feedback collection in multiple formats and languages, sentiment analysis, and insights dashboards.  
  [citya.link](https://citya.link/aiassist?utm_source=chatgpt.com)

**Comparison – Our Project vs Existing Solutions**

| **Feature** | **Existing Systems** | **our Project** |
| --- | --- | --- |
| Multimodal Input | Mostly text or images | Includes voice in local dialects |
| Real-Time Cross-Verification | Limited or no validation layer | Live validation against independent sources |
| Proactive Action | Primarily reactive reporting | Predictive AI enables preemptive governance |
| Inclusivity for Illiterate Users | Rarely supported | Designed for voice-first, low-digitally literate users |
| Integrated Smart Data Usage | Siloed, few integrations | Leverages open national Smart City datasets |
| Transparency & Accountability | Often opaque or delayed | Dashboard + live updates for transparency |