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DIGITAL GRIEVANCE REDRESSAL FOR CLEANER, SMARTER INDIA

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***Abstract*— The rapid urbanization in India has amplified civic challenges such as waste mismanagement, poor sanitation, pollution, and deteriorating public infrastructure. Traditional grievance redressal systems often suffer from delays, lack of transparency, and inefficient routing of complaints, leaving citizens dissatisfied and disengaged. This project proposes a centralized digital platform—accessible via web and mobile—that enables citizens to lodge civic grievances in a structured, trackable, and transparent manner. Leveraging Artificial Intelligence (AI) and Natural Language Processing (NLP), the system automatically verifies and categorizes complaints, prioritizes them based on urgency, and routes them to the appropriate authorities for timely resolution. Real-time tracking, automated notifications, and escalation mechanisms ensure accountability and improved response times. Additionally, the platform includes an administrative dashboard equipped with data analytics to monitor complaint patterns, resolution times, and geographic issue density. By integrating technology with governance, this project aims to promote cleaner urban environments and enhance citizen trust in public systems—contributing toward the broader vision of a Smarter India.**

Keywords*— *Digital Governance, Smart Cities, Grievance Redressal, NLP, AI/ML, CivicTech, Urban Infrastructure, EGovernance.

I. Introduction

India's urban landscape is rapidly transforming. With over 400 million people residing in cities and towns, the pressure on civic infrastructure has never been higher. Challenges such as ineffective waste management, poor sanitation, increasing pollution, broken public amenities, and irregular maintenance of civic assets are now everyday realities for urban citizens. Despite several initiatives like the Swachh Bharat Mission and the Smart Cities Mission, many cities continue to grapple with unaddressed civic complaints due to outdated grievance redressal systems.

Traditional methods—such as municipal helplines, emailbased complaint systems, or in-person visits to local bodies— are often inefficient, time-consuming, and opaque. Citizens frequently remain unaware of the status of their complaints, and local authorities are overwhelmed with unstructured data, lacking any prioritization mechanism. These gaps result in low public trust, delayed resolutions, and a lack of actionable insights for governance.

Digital transformation offers a promising pathway to modernize and optimize grievance redressal. By creating a centralized digital platform that integrates Artificial Intelligence (AI), Machine Learning (ML), and Natural Language Processing (NLP), civic complaints can be systematically handled, categorized, and resolved with far greater efficiency. Smart city technologies can also help automate tracking and escalation, enhancing both transparency and accountability in the process.

This research project introduces a technology-driven solution—Digital Grievance Redressal for Cleaner, Smarter India—which aims to bridge the gap between citizens and municipal authorities through an intuitive, intelligent platform. The proposed system not only allows users to lodge grievances easily but also enables real-time tracking, automated categorization, urgency-based prioritization, and administrative dashboards for data analysis. Such a solution aligns with India's vision of smart governance and digitally empowered citizens.

In the context of growing urban challenges and the need for responsive governance, this platform holds the potential to revolutionize how urban civic issues are reported, monitored, and resolved—paving the way for cleaner, smarter, and more livable cities across India.

II. Problem Statement

In India, citizens regularly face civic issues such as overflowing garbage bins, broken streetlights, potholes, open manholes, and polluted localities. These problems not only diminish the quality of life but also pose serious health and safety risks. Although numerous government initiatives aim to address these issues, the mechanisms through which citizens can report and resolve them remain largely inefficient and outdated.

The current grievance redressal systems—ranging from manual registers in municipal offices to centralized government portals like CPGRAMS (Centralized Public Grievance Redress and Monitoring System)—are often inaccessible, non-intuitive, and lack real-time tracking or transparency. In many cases, grievances are lost in bureaucratic delays, misrouted, or closed without adequate resolution. Moreover, there is little to no prioritization based on urgency or impact, resulting in delayed attention to critical problems. These inefficiencies contribute to citizen frustration, disengagement, and a lack of trust in local governance.

Another major issue lies in the unstructured and unverified nature of complaints received. Many civic bodies receive grievances through social media or informal channels, making it difficult to verify authenticity or extract actionable insights. Authorities are also constrained by the lack of analytical tools to understand complaint trends, resolution timelines, or area-specific issue concentrations, which limits their ability to make data-driven decisions.

In today's digitally connected world, there is a growing need for a user-friendly, transparent, and intelligent system that not only facilitates grievance reporting but also ensures systematic verification, categorization, urgency-based prioritization, and efficient routing of complaints to relevant departments. Such a system must also enable real-time updates to users and provide administrators with tools to monitor and optimize response efforts.

The problem, therefore, is twofold: citizens lack a reliable platform to raise and track civic grievances, and authorities lack a smart backend system for processing and responding to these complaints efficiently. Addressing this dual challenge requires a technology-driven approach that combines AI, NLP, and digital governance to build a streamlined, scalable grievance redressal platform for modern urban India.

III. Objectives

The primary objective of this project is to design and develop a centralized digital platform—accessible via web and mobile—that enables efficient, transparent, and intelligent redressal of civic grievances. The system aims to enhance citizen participation in urban governance while equipping municipal authorities with tools to manage and resolve complaints in a timely, data-driven manner. The major goals of the project are outlined below:

Grievance Submission: Allow citizens to report issues related to sanitation, waste, pollution, and public infrastructure through a user-friendly interface with support for images, location tagging, and category selection.

User Authentication: Ensure secure and verified access through authentication systems (e.g., Firebase, JWT) to prevent spam and misuse.

Verification of Grievances: Implement basic checks and validations, possibly with AI-based verification flags, to determine the legitimacy of submitted complaints.

Categorization using NLP: Automatically classify complaints into predefined categories (e.g., garbage, streetlights, waterlogging) using Natural Language Processing techniques.

Urgency-Based Prioritization: Use supervised learning models to assess the severity and urgency of complaints, helping authorities attend to critical issues faster.

Tracking and Notifications: Enable users to track the status of their complaints in real time, with notifications at each stage of the resolution process.

Escalation System: Design a mechanism to escalate unresolved or delayed complaints to higher authorities to ensure accountability.

Administrative Dashboard: Provide administrators with a comprehensive analytics dashboard displaying metrics such as resolution time, category-wise trends, and area-wise complaint density.

Data Analytics and Reports: Generate insights from collected data to help urban bodies identify problem hotspots and optimize resource allocation.

Together, these objectives are aligned with the broader vision of smart governance and cleaner urban spaces, and they lay the foundation for a scalable civic technology platform that empowers both citizens and authorities.

IV. Literature Review

Urban governance in India is evolving rapidly through the adoption of digital technologies, with an increasing emphasis on transparency, responsiveness, and citizen-centric service delivery. This section reviews key developments in smart city initiatives, government grievance platforms, and the application of Artificial Intelligence (AI) and Natural Language Processing (NLP) in civic systems.

4.1 Smart City Initiatives

The Smart Cities Mission launched by the Government of India has led to the creation of Integrated Command and Control Centers (ICCCs) in cities like Surat, Pune, and Visakhapatnam, aimed at enhancing real-time monitoring and operational efficiency. Surat Smart City, for instance, implemented a mobile-based grievance redressal system that allowed citizens to lodge complaints directly [2]. While these platforms mark significant progress, they often lack automation capabilities such as dynamic complaint prioritization and intelligent routing, which are essential for scaling services in larger urban settings.

4.2 Government Grievance Portals

Platforms such as CPGRAMS (Centralized Public Grievance Redress and Monitoring System) [14], the Swachhata App, and several state-level municipal portals serve as centralized channels for grievance submission. However, these systems largely depend on manual processing and face limitations such as:

- Absence of automated verification
- Lack of AI-based complaint categorization
- No real-time escalation workflows
- Limited use of analytics dashboards for administrators

Research suggests that while these systems increase accessibility, their efficiency is constrained by the lack of intelligent decision-making components [11][13].

4.3 AI and NLP Applications in Civic Grievance Systems

Recent studies have highlighted the transformative role AI and NLP can play in public grievance redressal. Jain et al. (2021) proposed a SMART approach to identifying public grievances on microblogs using NLP techniques, achieving high accuracy in classifying complaints into categories like

sanitation, water, and waste management [1]. Similarly, Mishra et al. (2024) proposed an adaptive AI-driven framework for grievance categorization and escalation, outlining a scalable system architecture [4].

Academic work on service ticket classification in IT support systems provides adaptable models for civic applications, demonstrating the effectiveness of supervised learning for prioritizing grievances based on urgency and content [4]. These studies underscore that AI models, trained on clean datasets, can substantially reduce resolution times and improve accountability.

4.4 International Benchmarks and Civic Tech Innovations

Global platforms such as FixMyStreet (UK) and SeeClickFix (USA) have demonstrated successful models for citizen participation in urban issue reporting. These platforms not only allow seamless complaint submission but also promote transparency by publishing complaint statuses publicly. These international case studies provide important insights into best practices for user interface design, open data principles, and scalable backend systems that Indian civic platforms can emulate [9].

Summary

While India has made commendable progress in digitizing public grievance mechanisms, most systems operate in silos and are constrained by their lack of intelligent features. The integration of AI—particularly NLP for complaint classification and ML for urgency prediction—remains underutilized but holds significant potential. There is a growing body of research that validates the feasibility and impact of such technologies in improving urban governance. This project builds upon that foundation to propose a unified, AI-powered platform aimed at enhancing grievance redressal and strengthening citizen trust in digital governance systems.

V. Proposed Methodology

The methodology for this project is designed to develop a centralized digital grievance redressal system that is intelligent, scalable, and citizen-friendly. It focuses on structured data intake, AI/ML-powered processing, and responsive complaint resolution. The architecture ensures the integrity and legitimacy of grievances, enables smart categorization and prioritization, and promotes accountability at each stage of the lifecycle.

5.1 Grievance Submission and Access Control All grievances are submitted through the official digital platforms—either via the web portal or mobile application. Unlike informal methods such as social media posts or verbal complaints, this centralized approach ensures data consistency and structured processing.

1. **User Authentication:** Citizens must register and log in to the platform via secure authentication methods using Firebase Auth or JWT. This prevents misuse and enables complaint tracking tied to user profiles.
2. **Input Validation:** Submitted complaints are checked for completeness, including mandatory fields like location, category, and description. Attachments like photos and videos help validate claims and provide visual proof.

5.2 Complaint Handling Mechanism

To streamline operations and reduce errors, the system uses rule-based logic and pre-defined complaint categories:

- **Categorization:** During submission, users choose the complaint category (e.g., sanitation, road damage, street lighting), ensuring proper routing to relevant departments.
- **Manual Review & Priority Tagging:** Admins review complaints and manually assign priority based on severity, location, and context.
- **Duplicate Detection:** Basic validation techniques help detect and flag duplicate complaints based on matching text fields and metadata like time, location, and media uploads.

5.3 Workflow and Data Flow

The life-cycle of a grievance involves several sequential stages:

- **Submission:** A user files a complaint with essential details.
- **Assignment:** Based on location and category, the complaint is routed to the appropriate department or official.
- **Tracking:** A status tracker is created, visible to both user and authority.
- **Resolution:** The assigned team resolves the issue and uploads proof of work.
- **Closure & Feedback:** Users can confirm satisfaction or escalate the case if needed.

5.4 Escalation and Notification System

If a complaint is not acted upon within a predefined time frame, it is automatically escalated to higher authorities. Notifications are triggered via SMS, email, or in-app alerts at key milestones—submission, assignment, resolution, and escalation.

5.5 Analytics and Admin Dashboard

The system logs and analyzes all complaint data to extract insights:

- Area-wise issue density
- Category-wise complaint distribution
- Average resolution time
- Escalation rates

This data is visualized through an admin dashboard built using tools like React.js and Chart.js/Recharts, providing actionable intelligence to urban governance bodies.

VI. System Architecture

The proposed system for Digital Grievance Redressal for Cleaner, Smarter India is designed as a multi-layered architecture that ensures seamless integration, processing efficiency, and scalability. Each layer is dedicated to a specific function, contributing to the system's overall goal of streamlining civic complaint registration, categorization, resolution, and monitoring. Below is a breakdown of each layer in the architecture:

1. User Interface Layer

This is the entry point for all users (citizens and administrators). It consists of a responsive web application built using React or Next.js and is optimized for both desktop and mobile use. The UI allows users to:

- Submit new complaints
- Track complaint status
- Receive real-time notifications
- Access historical complaint data

For administrators, it provides tools to view, filter, and manage complaints effectively.

2. Middleware / Processing Layer

This layer serves as the intermediary between the frontend and backend. It is responsible for:

- Validating complaint inputs (e.g., required fields, image formats)
- Enforcing rules for submission (e.g., frequency control, spam checks)
- Routing complaints to relevant departments based on selected categories
- Managing authentication and session data

This modular layer ensures smooth data flow and secures transactions across the platform.

3. Backend

Built using Node.js and Express.js, this layer manages:

- The business logic of the application
- Secure RESTful APIs for modules like login, complaint submission, updates, and tracking
- Authentication and authorization mechanisms
- Integration with database operations and admin functionalities

It ensures consistent, reliable handling of user and complaint data.

4. Database Layer

All user data, complaint details, and resolution logs are stored securely using relational databases like PostgreSQL or MySQL. This layer supports:

- CRUD operations on complaint data.
- Storing verification results and timestamps.
- Maintaining user and admin profiles securely.
- Logging escalation and response history for transparency.

5. Analytics & Admin Dashboard Layer This layer aggregates data from the database to generate meaningful insights. Admin dashboards offer:

- Area-wise complaint density heatmaps.
- Average resolution times.
- Trend analysis (e.g., recurring issues).
- Key Performance Indicators (KPIs) for governance. Visualization tools like Chart.js or Recharts can be integrated to improve decision-making.

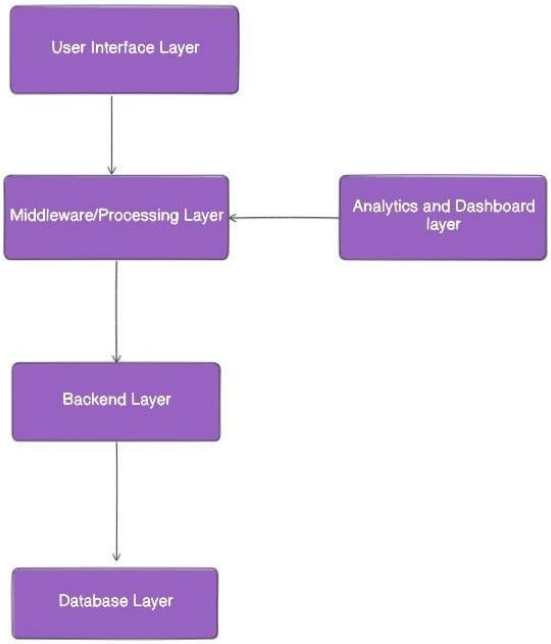

Fig. 6.1 System Architecture Diagram

VII. Technologies Used

This project leverages a modern, full-stack architecture for performance, scalability, and maintainability.

- **Frontend:** Developed using React.js for dynamic, responsive UI; Next.js may be used for server-side rendering and SEO benefits.
- **Backend:** Built with Node.js and Express.js, enabling efficient API routing and real-time operations through a non-blocking architecture.
- **Database:** Uses MongoDb for structured data storage, offering ACID compliance and optimized querying.
- **Authentication:** Utilizes JWT or Firebase Auth for secure, role-based access control and session management.

VIII. System Flow Design

To ensure clarity and transparency in how the application functions for different stakeholders, the system is divided into two core flows: the User Flow (for citizens) and the Admin Flow (for municipal staff or authority figures). These flow diagrams visually represent the step-by-step journey and interaction each user type has within the platform.

7.1 User Flow

The user flow captures the journey of a citizen user — from logging in, submitting a complaint, to receiving updates and providing feedback. This diagram outlines the various components a user interacts with and the decisions involved at each step.

Explanation:

- A user begins by registering or logging in through a secure authentication mechanism powered by JWT or Firebase Auth. This ensures identity verification and role-based access control.

- Once authenticated, the user lands on the dashboard, where they can submit a new complaint by selecting a predefined category (e.g., Sanitation, Road Damage), entering a detailed description, pinpointing the location via map or coordinates, and optionally uploading images.
- Upon form submission, the system performs clientside and server-side validations to check data integrity and completeness.
- The complaint is then routed to the relevant municipal authority. Meanwhile, the user gains access to a real-time tracking panel, where they can view the current status (e.g., Submitted, In Progress, Resolved), receive notifications, and estimated resolution timelines.
- Once the complaint is resolved, the user is prompted to submit feedback or a satisfaction rating, which contributes to system analytics and helps authorities improve service quality.

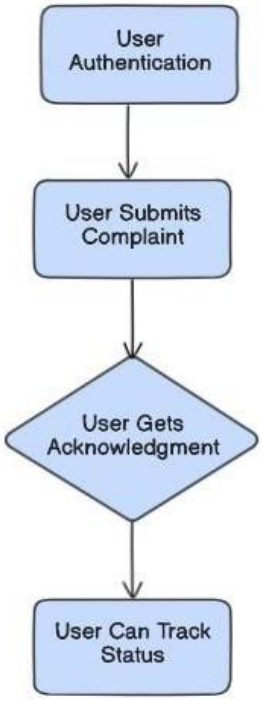

Fig. 8.1 User Flow Diagram

7.2 Admin Flow

The admin flow represents how municipal officers or administrators interact with the platform to manage and resolve complaints. It details how the backend routes issues, how admins view, verify, and act upon complaints, and how escalations are handled.

Explanation:

- Administrators begin by securely logging into the platform using role-based credentials. Depending on their access level (e.g., city admin, department head), they are directed to their customized dashboard.
- The dashboard displays a real-time feed of newly submitted complaints, sorted by urgency, category, or location. Admins can filter, search, and prioritize these entries for efficient handling.
- Each complaint undergoes a verification step, where the admin reviews the submitted data (e.g., images, descriptions, location) and determines its validity. Verified complaints are then assigned to the appropriate municipal department or field personnel.
- The backend logic supports automated prioritybased routing, ensuring critical issues (e.g., hazardous waste or broken water lines) are addressed promptly. If a complaint remains unresolved beyond the SLA (Service-Level Agreement) threshold, the system auto-escalates it
to higher authorities with notifications and status tags.
- Admins also have access to data analytics tools within the dashboard. These include visualization charts, heatmaps, and resolution timelines to monitor complaint trends, department performance, and user satisfaction.
- Additionally, the system provides features to respond to citizen feedback, export reports for internal reviews, and make informed decisions to enhance civic responsiveness.

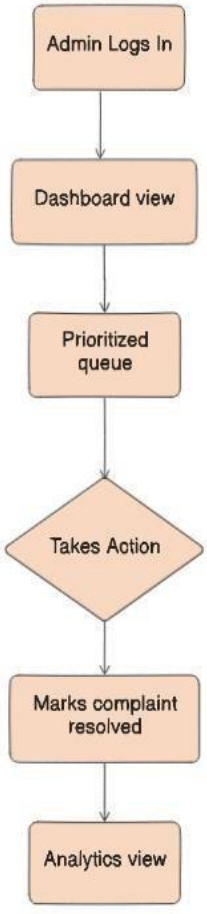

Fig. 8.2 Admin Flow Diagram

These flows form the backbone of the system design and serve as a blueprint for the technical implementation described in the next section.

IX. Implementation Plan

The development of the Digital Grievance Redressal for Cleaner, Smarter India system follows a structured, modular approach to ensure clarity, maintainability, and incremental progress. The plan is broken down into several key phases:

1. UI Design and User Authentication

The first step involves designing a clean, responsive, and intuitive user interface using React.js or Next.js. The UI will include a home page, complaint registration form, login/register pages, and user dashboard. User authentication will be integrated using Firebase or JWT, enabling secure login and role-based access (citizen/admin).

2. Complaint Form and Validation

The next phase includes the development of the complaint submission form. This form collects essential data such as:

- Complaint Category
- Location (text and map-based)
- Description
- Image Upload
- Date/Time Stamp

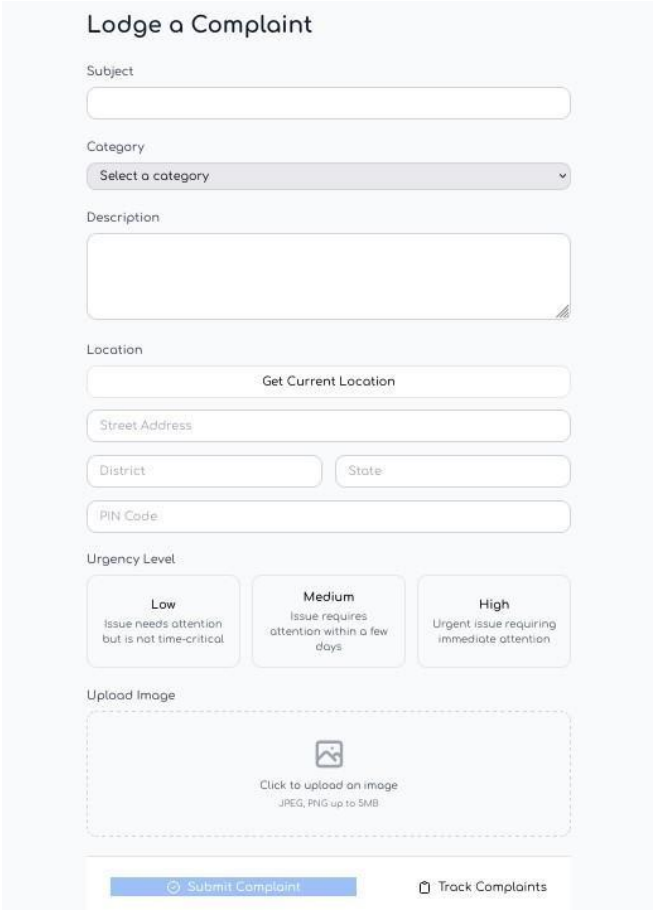

Fig.9.1 Screenshot of Complaint form

Validation will be enforced both on the client side (using form libraries) and server side (via Express middleware) to ensure data consistency, prevent spam entries, and minimize errors.

3. Routing, Tracking, and Escalation

Each verified and categorized complaint is assigned a unique ID and routed to the appropriate municipal body. A tracking system allows:

- Real-time status updates
- Notifications on progress
- Automated escalation to higher authorities if SLAs are breached

Escalation logic and routing configurations will be defined in the backend using Node.js/Express.

4. Admin Dashboard Creation

A separate admin dashboard will be created to:

- Visualize complaint distribution (e.g., heatmaps, charts)
- Track resolution timelines
- Access user feedback and ratings
- Monitor system metrics and generate reports Visualization tools like Chart.js, Recharts, or D3.js will be used to render dynamic, interactive data views.

5. Testing and Deployment

Each module will undergo rigorous unit, integration, and endto-end testing. Testing frameworks like Jest, Mocha, and Cypress may be used. After successful testing:

- The frontend will be deployed on Vercel
- The backend on Render or Cyclic
- The database will be hosted on services like Aiven or ElephantSQL

6. Future Enhancements

Post-deployment, the system can be extended with features such as:

- Multilingual NLP support
- IoT sensor integration for automatic reporting (e.g., waste bins)
- Mobile GPS tagging
- Sentiment analysis to detect emotional tone in complaints
- Chatbot support for guided complaint submission

Sample Data Format

To ensure organized, scalable storage and retrieval of complaints, a standardized data structure is defined. Below is a representative table showcasing the fields used to capture and manage grievance records:

Field Name	Data Type String	Description
ComplaintID	(UUID)	Unique identifier for each complaint
UserID	String	Unique ID referencing the user who submitted the complaint
Category	String	Category of the issue (e.g., Sanitation, Road, Waste, Water)
Location	String / JSON	Location of the issue (text + optional geocoordinates)
Description	Text	Detailed user description of the issue
DateSubmitted	DateTime	Timestamp of when the complaint was lodged
Status	Enum	Tracks complaint status (e.g., Submitted, Verified, Assigned, Resolved)
VerificationFlag	Boolean	Indicates whether the complaint passed legitimacy checks
PriorityLevel	Enum (Low/Med/High)	Assigned based on AI/ML urgency classification
AssignedDept	String	Department or authority to which the complaint has been routed
ResolutionDate	DateTime (nullable)	Date when the issue was marked as resolved
EscalationLevel	Integer (0–2)	Indicates whether and how many times the complaint has been escalated
Attachments	Integer (1–5)	Optional feedback score provided by the user post-resolution

TABLE: 8.1 *Sample data*

X. Results and Benefits

The implementation of the Digital Grievance Redressal for Cleaner, Smarter India system is expected to yield a wide range of tangible benefits for both citizens and urban governance bodies:

1. Improved Response Times
By automating complaint classification, prioritization, and routing, the system significantly reduces the manual overhead typically involved in grievance handling. This results in faster acknowledgment, quicker action by authorities, and shorter resolution timelines.

2. Data-Driven Civic Planning
The integrated analytics dashboard empowers administrators with deep insights into complaint trends, area-specific issues, and frequently recurring problems. These patterns can inform long-term infrastructure planning, resource allocation, and targeted interventions.

3. Greater Citizen Trust
Providing real-time status updates, clear escalation paths, and feedback mechanisms builds citizen confidence in the system. Users feel heard and empowered, which increases civic engagement and cooperation.

4. Transparent Governance Workflow The end-to-end visibility of complaint lifecycle—from submission to resolution—ensures transparency. Each step is tracked and recorded, minimizing the scope for negligence, loss of complaints, or bureaucratic delays.

5. Better Accountability
Role-based access control, resolution deadlines, and escalation mechanisms hold officials and departments accountable for timely actions. This not only streamlines operations but also improves overall governance standards.

XI. Challenges

Despite its promising design and objectives, the Digital Grievance Redressal for Cleaner, Smarter India platform is likely to encounter several technical, social, and operational challenges:

1. Multilingual Complaints
India's linguistic diversity poses a major hurdle in natural language processing (NLP). Many citizens prefer to submit grievances in regional languages or mixed-language formats (e.g., Hindi-English). Training accurate multilingual NLP models and ensuring consistent classification across languages remains a complex task.

2. False or Spam Reports
User-generated content is susceptible to abuse. The system must filter out irrelevant, duplicate, or intentionally misleading complaints without wrongly rejecting genuine issues. This requires a strong verification mechanism and potentially, human moderation in critical cases.

3. Model Training Data
AI models for classification, prioritization, and legitimacy checks need large volumes of labeled grievance data. Acquiring high-quality, domain-specific datasets for training supervised learning models is difficult, especially for civic categories and localized contexts.

4. System Scalability in Rural Areas
While the platform is primarily designed for urban smart governance, expanding to semi-urban and rural areas brings challenges related to digital infrastructure, internet access, and limited technical resources at local municipal bodies.

5. Public Adoption and Digital Literacy The success of this system hinges on widespread usage by citizens. However, digital literacy remains uneven across demographics. Continuous outreach, awareness campaigns, and possibly alternate submission channels (e.g., IVR or assisted kiosks) will be necessary to ensure inclusive access.

XII. Conclusion

The Digital Grievance Redressal for Cleaner, Smarter India platform presents a forward-thinking solution to the persistent challenges of urban civic issue management. By leveraging the power of Artificial Intelligence, Natural Language Processing, and modern web technologies, it transforms the grievance redressal process into one that is timely, transparent, and citizen-centric.

Aligned with the objectives of India's Smart Cities Mission, this system empowers both residents and municipal authorities. Citizens benefit from a simplified complaint process, real-time tracking, and assured responsiveness, while administrators gain valuable data insights, enhanced accountability mechanisms, and streamlined operations.

In the long term, such digital governance tools will not only help clean up public spaces and reduce civic frustration but also cultivate a more engaged, trusting, and tech-enabled society. The system stands as a model of how innovation can bridge the gap between government services and citizen needs—paving the way for smarter, cleaner, and more inclusive urban living.

XIII. Future Scope

While the current version of the Digital Grievance Redressal for Cleaner, Smarter India system lays a solid foundation for tech-driven civic governance, several advanced features can be incorporated to enhance its functionality, scalability, and inclusivity in the future:

1. IoT Sensor Integration

Smart devices such as sensor-enabled garbage bins, air quality monitors, and road condition sensors can be linked to the system to automatically generate complaints or alerts. This would reduce reliance on manual reporting and enable proactive issue resolution.

2. GPS Auto-Tagging of Complaints

Integrating GPS features, especially in mobile apps, can autotag complaints with accurate geolocation. This eliminates user effort in specifying the location and improves complaint routing to the correct municipal jurisdiction.

3. Sentiment Analysis for Urgent Flagging By analyzing the tone and urgency in user-submitted complaints using sentiment analysis, the system can dynamically assign priority levels—even when users don't explicitly mark complaints as urgent. This makes the platform more responsive and intelligent.

4. Multilingual Support Using Language Models

To accommodate India's linguistic diversity, future iterations can leverage advanced language models (like multilingual BERT or LLaMA) for real-time translation and understanding of complaints in regional languages, making the system accessible to a wider population.

5. Public Feedback and Rating Mechanism

Once complaints are resolved, users can be prompted to rate the quality of service and resolution experience. This feedback loop would not only help in performance evaluations of departments but also reinforce public accountability.

These enhancements will further align the system with the evolving needs of smart cities and reinforce its role in building a citizen-first digital governance model.

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