INTERNATIONAL JOURNAL OF ADVANCED INNOVATIVE TECHNOLOGY IN ENGINEERING

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Civic Connect – Local Issue Reporter

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Article History

Received on: 20 July 2026
Revised on15 Aug 2026
Accepted on: 20 Sept 2026
Keywords: Smart City, Civic Issues, Complaint Management, Urban Governance, Citizen Engagement.

e-ISSN: 2455-6491

DOI: 10.65809/IJAITE/26/v03sp02/057

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ABSTRACT

Urban areas in India often struggle with ineffective mechanisms for reporting and resolving civic issues due to the absence of a centralized and efficient system. As a result, common problems such as damaged roads, malfunctioning street lights, poor waste management, water leakage, and traffic congestion frequently remain unattended for long periods. This lack of coordination reduces transparency and limits effective communication between citizens and municipal authorities. To overcome these challenges, a web-based platform designed to streamline the reporting process and enhance citizen participation. The system focuses on frontend development using HTML, CSS, and JavaScript to create a simple and intuitive user interface. Users can easily report issues by submitting descriptions, uploading images, and providing location details. In addition, the platform includes a complaint tracking feature that allows users to monitor the progress of their reports, categorized as Pending, In Progress.

1. INTRODUCTION

Rapid urbanization in India has significantly increased the number of civic issues such as damaged roads, inefficient waste management, water leakage, and traffic congestion. However, many cities still lack a centralized and efficient system for reporting and managing these problems. Existing solutions are often fragmented, difficult to access, or lack transparency, leading to delayed responses and reduced citizen trust. This situation highlights the need for a simple, accessible, and reliable platform that can bridge the communication gap between citizens and municipal authorities.

To address this challenge, this paper presents Civic Connect – Local Issue Reporter, a web-based platform designed to streamline the reporting and tracking of civic issues. The system is developed with a strong focus on frontend technologies, specifically HTML, CSS, and JavaScript, to create a clean, responsive, and user-friendly interface. Users can easily submit complaints by providing descriptions, uploading images, and sharing location details.

Furthermore, the platform includes a complaint tracking feature that allows users to monitor the status of their reports, ensuring transparency and accountability.

By enhancing user engagement and simplifying communication, the proposed system supports efficient urban governance and encourages active citizen participation.

2. RELATED WORK

The study titled "Smart Civic Issue Reporting System" by Walwadkar et al. (2022) presents an intelligent Android-based application designed to simplify the process of reporting civic infrastructure issues such as damaged roads, garbage overflow, and malfunctioning streetlights. The authors highlight the shortcomings of traditional grievance redressal systems, which are often time-consuming, inefficient, and lack transparency.

To overcome these limitations, the study proposes an automated mobile-based reporting platform that integrates GPS for accurate location tracking and camera functionality for capturing visual evidence. The system further incorporates advanced machine learning techniques, including hybrid CNN-RNN models, to analyze images and assess the severity of reported issues. In addition, an SVM-based NLP model is utilized to interpret and classify textual complaint descriptions, enabling prioritization of critical cases for faster resolution.

The proposed system follows a three-tier client-server architecture, clearly defining the roles of users, municipal officials, and administrators to ensure efficient communication and management of complaints.

Furthermore, the study reviews existing smart city solutions such as MarkaSpot and AppCivist, which enhance citizen participation through location-based and social interaction features. Prior research also explores the use of clustering algorithms for analyzing complaint patterns, as well as deep learning techniques like CNNs and RNNs for image classification and severity detection.

Overall, these contributions highlight the increasing importance of artificial intelligence, geolocation, and crowdsourcing technologies in improving civic engagement. The proposed Smart Civic Issue Reporting System builds upon these advancements to deliver a more efficient, adaptive, and transparent platform, thereby supporting the vision of smart cities and citizen-centric urban governance.

Table 1: Literature Survey

Author(s)	Title	Merits	Demerits
B. Rohith Kumar1, K. Hrushikesh2, K. Niveeth Reddy3, A. Sriram4 (2023)	A paper pothole detection	Efficiently detects potholes in real-time using the YOLOv4 deep learning algorithm with high accuracy (~85%) and fast processing speed.	The system struggles with long-distance pothole detection and occasional misclassification, limiting its reliability in all driving conditions.
Gurudeep G1, Prachi Pingle, Nitin G C (2023)	Repairing of potholes and highway maintenance	Provides a comprehensive review of modern, sustainable , and cost-effective methods for pothole repair and highway maintenance.	Lacks experimental implementation or quantitative performance data to validate the effectiveness of the discussed repair methods..
Anjaly Antony, Minla K.S (2021)	Civic complaint reporting using image processing	Uses AI to quickly detect and prioritize civic issues, improving efficiency and transparency	Depends on internet and GPS, which may cause issues in low connectivity areas.
Krishna Sonawane , Prachi Pingle, Trupti Zagade, Siddhant Lunawat (2021)	City cleanliness detection using geo- tagged street images	Enables real-time automated street cleanliness s detection.	Depends on strong internet and quality image data.

3. PROPOSED METHODOLOGY

The proposed system, Civic Connect – Local Issue Reporter, adopts a frontend-centric approach to design an interactive and user-friendly platform for reporting civic issues. The methodology primarily focuses on developing a responsive interface using HTML, CSS, and JavaScript to ensure accessibility across different devices and browsers.

The system begins with the design of structured web pages using HTML, which define the layout for key modules such as user registration, complaint submission, and complaint tracking. CSS is utilized to enhance the visual appearance, ensuring a clean, consistent, and responsive design that improves user experience. JavaScript is implemented to handle dynamic functionalities, including form validation, real-time user interactions, and status updates without requiring page reloads.

The complaint submission module allows users to enter issue details, upload images, and provide location information through an intuitive form interface. Input validation techniques are applied to ensure accurate and complete data entry. The complaint tracking module dynamically displays the status of reported issues as Pending, In Progress, or Resolved, improving transparency.

Overall, the frontend methodology emphasizes simplicity, responsiveness, and interactivity, enabling efficient communication

between users and the system while enhancing usability and engagement.

4. RESULTS AND DISCUSSION

The implementation of Civic Connect – Local Issue Reporter demonstrates the effectiveness of a frontend-focused approach in improving the process of reporting civic issues. The developed interface, built using HTML, CSS, and JavaScript, provides a clean, responsive, and user-friendly environment that allows users to easily submit complaints with relevant details such as descriptions, images, and location information.

The complaint submission module was successfully tested for usability and accuracy, with form validation ensuring that incomplete or incorrect data is minimized. The complaint tracking feature enables users to monitor the status of their issues as Pending, In Progress, or Resolved, which enhances transparency and builds user trust in the system.

From the observations, users were able to navigate the platform with minimal effort, indicating a high level of usability and accessibility. The responsive design ensured smooth performance across different devices, including mobile phones and desktops.

Overall, the system improves user engagement and simplifies communication between citizens and authorities. However, the current implementation is limited to frontend functionality, and future enhancements may include backend integration, real-time notifications, and database connectivity for improved scalability and performance.

5. IMPLEMENTATION

The implementation of Civic Connect – Local Issue Reporter focuses on developing an efficient and user-friendly frontend interface using HTML, CSS, and JavaScript. The system is designed as a web-based application that can be accessed through standard web browsers without requiring any additional software installation.

HTML is used to create the basic structure of the web pages, including forms for user registration, login, and complaint submission. CSS is applied to enhance the visual design by providing a consistent layout, color scheme, and responsive behavior across different screen sizes. JavaScript is integrated to add interactivity, including form validation, dynamic content updates, and smooth navigation between different sections of the application.

The complaint submission feature allows users to enter issue details, upload images, and provide location information through an intuitive interface. The complaint tracking functionality is implemented to display the status of each issue, improving transparency and user awareness.

The system is tested across multiple browsers to ensure compatibility and performance. Overall, the implementation emphasizes simplicity, responsiveness, and ease of use, making the platform accessible to a wide range of users.

CONCLUSION

This paper presented Civic Connect – Local Issue Reporter, a web-based platform designed to improve the reporting and management of civic issues in urban areas. The system focuses on delivering a simple, responsive, and user-friendly interface using HTML, CSS, and JavaScript, enabling citizens to easily report problems such as damaged infrastructure, waste management issues, and water leakage. The implementation demonstrates that an effective frontend design can significantly enhance user engagement and simplify the complaint submission process. The inclusion of features such as image upload, location input, and complaint status tracking improves transparency and encourages active participation from citizens. As a result, the platform contributes to better communication between users and municipal authorities. However, the current system is limited to frontend functionality. Future work can focus on integrating backend technologies, database management, and real-time notification systems to improve scalability and overall performance. Overall, the proposed solution serves as a step toward smarter urban governance and more efficient civic issue management.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to the Department of Computer Engineering at Suryodaya College of Engineering & Technology for providing the necessary resources and a supportive environment for carrying out this research work. The authors are especially thankful to Ms. Mrunali Gajbhiye for her valuable guidance, continuous support, and constant encouragement throughout the development of this project. Her insights and suggestions greatly contributed to the successful completion of this work.

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