

Autonomous Grievance Redressal System for E-Governance Using AI and Automation.

Ms. Jagtap Diksha, Ms. Sukale Shubhada, Ms. Pachpute Avantika

Prof. T. S. Nalawade, Prof. S. B. Bhosale

Student, Computer Department

Jaihind College of Engineering, Pune, India

dikshajagtap2004@gmail.com, sukalessr47@gmail.com, avantikapachpute900@gmail.com,

nalawadet1@gmail.com, ssachinbhosale@gmail.com

Abstract: *In the modern era of digital governance and organizational transparency, efficient grievance handling plays a crucial role in ensuring accountability, responsiveness, and citizen satisfaction. The traditional paper-based or manually managed grievance redressal systems often face major challenges such as data loss, lack of tracking mechanisms, delayed communication, and human error, which hinder timely resolution of complaints. To overcome these issues, the proposed Grievance Redressal System introduces a smart, cloud-integrated, and real-time digital platform that streamlines the process of registering, tracking, and resolving complaints efficiently across both Android and web interfaces. The system is developed using Java/XML for the Android module and HTML, CSS, JavaScript, and Bootstrap for the web module. The backend employs Firebase Realtime Database and Firebase Cloud Storage to enable seamless communication, real-time data synchronization, and secure storage of multimedia evidence such as images. Users can register and log in securely via Firebase Authentication, file complaints with textual descriptions, photographs, and automatically captured GPS locations, and track the complaint's progress through live status updates. Each complaint is classified based on category and urgency, automatically forwarded to the relevant department, and prioritized using built-in logic for faster response. Administrators, through the web dashboard, can monitor complaints from all users, filter them by type or status, update resolution progress, and view analytics through charts and graphs. The dashboard also integrates map visualization to display the geographic distribution of complaints, assisting departments in identifying problem clusters and optimizing their response strategy. Feedback and rating features allow users to evaluate the quality of resolutions, creating a transparent two-way communication channel between citizens and authorities. The system also enhances data-driven governance by maintaining a digital log of every complaint's lifecycle, which can be analysed to identify patterns, high-demand areas, and recurring issues. This not only accelerates service delivery but also fosters public trust and accountability.*

Keywords: Grievance Redressal System, Complaint Management, Real-Time Tracking, Smart City Governance, Web Dashboard, Transparency, Public Administration, Digital Complaint Resolution

