CIVILEO – A Municipal Complaint Management App

Team Name: BOTS

Hackathon: GEN-AI Hackathon by JAAZZE

Problem Statement

Cities often deal with everyday problems like overflowing drains damaged power lines, and water scarcity. People find it hard to report these issues because of old-fashioned manual complaint systems that work, and can be misused. Many times, complaints stay unresolved or are marked as fixed without checking, which makes anger issues and unhappy residents. We all need the safe and clear user-friendly platform. By which users can report issues and track the updates, and can conform when they are solved. It not only makes users happy but also makes cities clean and increases the responsibility of cleanliness in officials to develop cities infrastructure

Target Audience & Context

Our primary users include people in cities and towns who face daily urban challenges. City officials require good tools to handle and solve these problems. The app allows residents to report their concerns while helping cities monitor and fix issues. It has a key role in India's expanding urban centres where quick growth puts stress on public services. This application bridges citizens and authorities to improve accountability and city systems. It gives people a platform to raise concerns and helps officials act. This method works towards improving life in cities for all.

Use of Gen-AI

Generative AI improves CIVILEO by reviewing uploaded videos and classifying issues, assigning urgency levels, and linking locations. When someone shares a complaint video, AI tools examine both the visuals and audio to determine the type of issue, like drainage problems or faulty electric wires. This cuts down the need for manual sorting, which helps city workers respond more . Simple text summaries created by AI make complaints easier to understand for teams. It also studies patterns in complaints across neighbourhoods creating clear heatmaps that show areas with frequent problems. These insights allow local governments to anticipate and stop recurring problems making overall planning and resource management better. Generative AI speeds up problem resolution, helps make better decisions, and builds a smoother complaint handling system

4. Solution Framework

CIVILEO functions as a secure, transparent, and AI-powered municipal complaint system.

Workflow:

1. **Registration of Complaint:** Citizens upload video evidence with issue details.

2. **OTP Verification:** User identity is authenticated via mobile OTP to prevent fake submissions.

3. **AI Analysis:** Gen-AI categorizes the complaint, extract location data, and assigns urgency.

4. **Complaint Dashboard:** Municipal staff access AI-generated summaries and heatmaps to prioritize workloads.

5. **Real-Time Tracking:** Users can track status updates at each stage using the application.

6. **Resolution Confirmation:** The OTP verification is done by the user to verify whether the problem is solved or not, by which they can mark the complaint status as closed

Architecture:

- **Frontend:** HTML, CSS, JavaScript

- **Backend:** Node.js and Python APIs

- **AI Models:** Video processing, text summarization, complaint categorization

- **Heatmaps:** Google Maps API .

The solution ensures high accuracy, security, and transparency while minimizing manual intervention, delays, and corruption.

Feasibility & Execution

The solution uses common technologies and APIs, which makes it easy to place action. OTP APIs are placed to allow secure ways to verify users. Heatmaps get created through Google Maps API or tools like Leaflet.js. Cloud hosting and scalable databases handle big user groups with little trouble. A small mixed-skill team could create a working MVP in about 8 to 12 weeks. Cities would need to work together for real-time links with response teams.

Scalability & Impact

CIVILEO is highly scalable for cities of any size. As more citizens join, AI-based complaint analysis handles the increased volume efficiently. Heatmaps help municipalities allocate resources dynamically, addressing the most critical areas first. The platform can expand nationally, integrating with smart city programs and Swachh Bharat initiatives. Its transparency builds public trust, while proactive issue resolution improves urban safety and living standards. Over time, municipalities can analyse long-term data trends to optimize infrastructure planning and policy-making.

Conclusion / Summary / Minimum Lovable Product

CIVILEO offers a secure, AI-powered platform for transparent municipal complaint management. Its unique combination of OTP verification, video-based complaints, AI analysis, and heatmap visualizations ensures accountability, faster resolutions, and public trust. The MVP focuses on core functions: secure complaint submission, AI categorization, real-time tracking, and municipal dashboards. CIVILEO can significantly transform how citizens and municipalities collaborate for better city governance.