



Use Case: AI-Powered Solid Waste Management for European Municipal Corporation

Client

A prominent Municipal Corporation in Europe, responsible for various civic services, including crucial solid waste management. Efficient waste collection and maintaining clean city streets were pivotal to ensure high citizen satisfaction and a positive service rating.

Business Problem

The Municipal Corporation grappled with the challenge of timely and effective solid waste management. Diverse types of waste, ranging from car tires and bicycles to glass bottles and textiles, cluttered the streets. Multiple agencies were tasked with waste collection, each specializing in different waste categories. Coordinating these agencies to clear all types of waste efficiently, however, was a manual and time-consuming process. Delays in waste collection impacted service ratings and citizens' satisfaction, necessitating an innovative solution.

Solution

To revolutionize solid waste management, we conceptualized and developed an AI-Powered Complaint Management platform, which provided an efficient means for citizens to report waste complaints:

- **Citizen Engagement:** We designed an intuitive portal allowing citizens to swiftly report waste complaints by uploading relevant pictures along with contextual descriptions.
- **AI-Powered Insights:** Employing Computer Vision and Deep Learning models, the platform automatically categorized waste types depicted in uploaded images. Additionally, it processed text descriptions to understand the context of complaints.
- **Ticket Generation:** With AI-generated insights, the platform seamlessly created tickets for the appropriate waste collection agencies based on waste category and location. This replaced the manual and time-intensive process of coordinating multiple agencies.

Outcome

The AI-Powered Solid Waste Management platform achieved significant outcomes for the Municipal Corporation:

- **Efficient Waste Collection:** By automating the process of categorizing waste and generating tickets for collection agencies, the platform expedited waste removal and ensured clean city streets.
- **Citizen Satisfaction:** Citizens appreciated the streamlined waste management process, leading to improved satisfaction levels. The prompt resolution of waste complaints elevated the Municipal Corporation's service rating.
- **Operational Enhancement:** The Municipal Corporation experienced operational efficiency by eliminating delays in waste collection coordination, which in turn optimized resource allocation.

Conclusion

The implementation of the AI-Powered Solid Waste Management platform showcases how technology can enhance civic services and elevate citizen satisfaction. By leveraging AI's capabilities in image recognition and data processing, the Municipal Corporation transformed waste management from a laborious task into an efficient, citizen-centric process. This successful integration of technology and public services serves as a model for municipalities striving to improve urban living standards and maintain the cleanliness of their cities