

# Intelligent Waste Segregation System with Automated Reporting

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**Abstract:** *The Intelligent Waste Segregation System with Automated Reporting is an innovative solution designed to enhance the efficiency of waste management processes. Leveraging advanced technologies such as Internet of Things (IoT), machine learning, and data analytics, the system automates the segregation of waste into categories such as recyclables, non-recyclables, and hazardous materials. Smart sensors integrated into waste bins identify the type of waste deposited, while a centralized intelligent processing unit analyzes the data in real-time. The system generates automated reports, providing valuable insights into waste composition, volume trends, and recycling rates. This technology-driven approach not only streamlines waste management operations but also facilitates informed decision-making for sustainable environmental practices.*

**Keywords:** Ultrasonic sensor, Automation, Sensor Technology, Waste Management, Automated Reporting.

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