**Smart Waste Management System For Metropolitan Cities**

**Technology: IOT**

**[1]**https://ieeexplore.ieee.org/document/8058247

Smart waste management using Internet of Things

**Pros:** At present solid waste management is a major concern in the metropolitan cities of the developing and developed countries. In this paper, we have discussed the definition of Internet of Things and its elements, testing and prototyping tool cooja simulator

**Cons:** That project only monitoring the dustbin content level not intimating the authorities and truck.

**[2]**https://www.researchgate.net/publication/338342002\_IOT\_Enabled\_Smart\_Waste\_Bin\_with\_Real\_Time\_Monitoring\_for\_efficient\_waste\_management\_in\_Metropolitan

# IOT Enabled Smart Waste Bin with Real Time Monitoring for efficient waste management in Metropolitan Cities

# Pros: The capacitance sensor in the bin continuously monitors the level of the bin in real time and communicates to the central cloud where the bins are connected. Ultrasonic sensor is used to open and close the lid of the bin whenever the persons are nearby the bin. Such smart bins are connected to the cloud, where the bin status are communicated, recorded and monitored by the local bodies through and android app or a centralized server. Thus the designed smart bin and proposed waste management system have better level of smartness compared to existing ones in metropolitan cities in a centralized manner

**Cons:** That project only monitoring the dustbin content level not intimating the authorities and truck.

**[3]**<https://www.pantechsolutions.net/iot-based-smart-waste-management-system-for-smart-city>

IOT based smart waste management system using arduino

**Pros:**  In this system, a 24×7 monitoring system is designed for monitoring dumpsters ,A smart and organized system is designed for selective clearing The ultrasonic sensor is used for measuring the level of waste in the dustbin , DC motor powered platform is used for segregating wet and dry waste ,IR sensor and moisture sensor is used for separating wet and dry waste .If either of the containers is full then an alert message is sent from the dustbin  to employess and the cloud. In turn, employees can clear the corresponding dumpster .

**Cons:** Very less effective in cleaning city.That project only monitoring the dustbin content level not intimating the authorities and truck.

**[4]**https://www.hindawi.com/journals/wcmc/2020/6138637/

# Waste Management System Using IoT-Based Machine Learning in University

# Pros: This article presents an investigation case implemented at the real campus of Ton Duc Thang University (Vietnam) to evaluate the performance and practicability of the system’s implementation. We examine data transfer on the LoRa module and demonstrate the advantages of the proposed system, which is implemented through a simple circuit designed with low cost, ease of use, and replace ability. Our system saves time by finding the best route in the management of waste collection.

# Cons: That project only monitoring the dustbin content level not intimating the authorities and truck. The information will not show application.

**[5]**https://ieeexplore.ieee.org/document/9528293

# IoT based smart waste management system

# Pros: The system is implemented using two ultrasonic sensors which is being controlled by Node MCU. One of the ultrasonic sensor detects the level of the waste in the bin and other detects the person approaching the bin to dispose the waste. This detection helps in automatic opening and closing of the lid. Servo motor is connected to the lid which serves the action of closing and opening of the lid. In this system, level of waste in the bin will be sent to concerned authorities. The IoT data is stored and monitored using Blynk app. The proposed system is reliable, cost effective and can be easily implemented.

# Cons: Very less effective in cleaning city.That project only monitoring the dustbin content level not intimating the authorities and truck. The information will not show application.