

## **LITERATURE SURVEY ON SMART WASTE MANAGEMENT FOR METROPOLITAN CITIES:**

The idea of smart garbage bins and systems have been in discussion for quite a long time. The technologies used at disposal to develop this smart system have also evolved, Internet of Things (IoT). Each idea seems to be similar but is slightly different at its core and our proposed work is no exception from the same. After the IoT field, finding its hold in our lives, this is our original plan for designing a smart garbage collection system which has provision for citizen participation and analysis of data for better decision making. At hardware level, the smart system is a garbage bin with ultrasonic sensor, a micro-controller and Wi-Fi module for transmission of data.

S.NO	YEAR	AUTHOR	TITLE	METHODOLOGY
1.	2013	Lilliana Abarca Guerrero, Ger Maas, William Hogland	Municipalities in emerging economies have a number of sewerage difficulties.	Information was collected about the solid waste management system and segregation of waste
2.	2015	Suyog Gupta and Dr. Pradeep Kuma	A Case Study of Kanpur City's IOT-Based Intelligent Bin for Smart Cities RealTime Planning and Forecasting Strategy for Trash	Used RFID systems along with GSM networks to collect data and generate reports about solid waste collection
3.	2015	Narayan Sharma, Nirman Singha and Tanmoy Dutta	Implementing Intelligent Bins in Transport Systems	Text messages indicating the levels were sent to the central office and the updated values of the dustbin level are taken to form the real time report.
4.	2016	Meghana K C and K R Nataraj	Automated Garbage building Green Infrastructure iot	Used IR sensor to sense the garbage level when it reaches the threshold.
5.	2016	Vishesh Kumar Kurre	Internet - of - things Intelligent Trash Collection Container Defendant and the plaintiff Warning	Use Raspberry Pi,ARM Microcontroller to absorb content from trash bin, process the data and finally share mail/message with Municipal Corporation.

6.	2019	W. A. L. Gayanthika, G. K. C. D. Maduranga, A. I. S. Silva, S. D. H. S. Wikramarathne, R. M. I. S. Ranasinghe	Efficient Waste with an Intelligent Trash Can	Use of RFID tag to validate the ID of the user and open the lid of the dustbin. If indeed the trashcan is overflowing, send an sms to the administration.
7.	2020	Ms. Akhila Joseph, Ms. Anjali, Ms. Suhaila B.M and Mr. Mahesh B.L	Implementing Intelligent Bins in Transport Systems	The refuse collectors were fixed along an ultrasonic sensor that collected garbage level data and uploaded it to the main server.
8.	2020	OTelugu Maddileti , Harish Kurakula	lot Based Smart Dustbin	Smart Dustbin was created using ultrasonic sensors, Arduino, NodeMCU that opens the lid, when a biological hand is found, and when garbage is detected and also sends the notification in the form of LED
9.	2021	Srinivasan P, Thiyaneswaran B, Jaya Priya P, Dharani B, and Kiruthiga V	Smarter Trash cans Leveraging Wifi	Such as a sensor and a node that senses and transmits the waste level in the trash can, and sent it onto such a webpage if the trash can is 70% full.