LITERATURE SURVEY

ON

Smart Waste Management System For Metropolitan Cities

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<u>ABSTRACT</u>

Indiscriminate disposal of strong waste is a major problem in urban centers of most developing countries and it poses a serious risk to healthful living of the citizens.Access to dependable records on the state of stable waste at exclusive places in the city will help both the local government and the residents to correctly manipulate the menace.In this paper, an smart stable waste tracking system is advanced the usage of Internet of Things (IoT) and cloud computing technology.The fill stage of solid waste in every of the packing containers, which are strategically located throughout the groups, is detected the use of ultrasonic sensors.A Wireless Fidelity (Wi-Fi) communication hyperlink is used to transmit the sensor facts to an IoT cloud platform known as ThingSpeak.Depending at the fill degree, the machine sends suitable notification message (in form of tweet) to alert applicable government and concerned citizen(s) for necessary action.Also, the fill level is monitored on ThingSpeak in actual-time.The gadget overall performance indicates that the proposed answer can be discovered useful for efficient waste management in clever and connected groups.

Book/Journal&Year	Author's name	Inference
IOT Enabled Smart Waste Bin with Real Time Monitoring for efficient waste management in Metropolitan Cities	**Manju Mohan** ● Hindustan Institute of Technology & Science **Kuppan Chetty Ramanathan** ● Hindustan University	In this paper, design of a Waste Bin with real time monitoring is presented and a smart waste management system is proposed using the recent technical advancements of automation and Internet of Things (IoT). 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 is communicated, recorded and monitored by the local bodies through and android app or a centralized server.
2017 International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC)	K. N. Fallavi, V. R. Kumar and B. M. Chaithra, "Smart waste management using Internet of Things.	The Objectives of the paper, as the population is growing, the garbage is also increasing. This huge unmanaged accumulation of garbage is polluting the environment, spoiling the beauty of the area and also leading to health hazards. In this era of Internet, IOT (Internet of Things) can be used effectively to manage this solid waste. In this paper, we have discussed the definition of Internet of Things and its elements, testing and prototyping tool cooja simulator and finally the study of various literatures available on smart waste management systems using IOT.
IoT-Enabled Solid Waste Management in Smart Cities	S. Vishnu , S. R. Jino Ramson, Samson Senith , Theodoros Anagnostopoulos, Adnan M. Abu-Mahfouz, Xiaozhe Fan, S. Srinivasanand A. Alfred Kirubaraj	The development and validation of a hybrid network architecture approach to efficiently manage trash bins in public places and residential areas of cities were discussed in this paper. All facets of an IoT system have been developed, including the design of end nodes, i.e., PBLMU and HBLMU; long-range data transmission with LoRa network for public places and Wi-Fi connectivity for homes; long-term data storage; and hierarchical visualization of trash bin level with the intelligent GUI. According to the obtained results, the proposed IoT-enabled solid waste management system is well

		suited for monitoring real-time trash bin information in smart cities. Future work in this area, trash bin information (unfilled level and geolocation coordinates) obtained through the proposed IoT system can be used for framing geographic information systems (GIS). Furthermore, optimum routes can be obtained through machine learning algorithms for waste collection trucks.
A CNN-Based Smart Waste Management System Using TensorFlow Lite and LoRa-GPS Shield in Internet of Things Environment	NICHOLAS CHIENG ANAK SALLANG , MOHAMMAD TARIQUL ISLAM , (Senior Member, IEEE), MOHAMMAD SHAHIDUL ISLAM , (Member, IEEE), AND HASLINA ARSHAD	The main purpose of this research is to develop a smart waste management system using the deep learning model that improves the waste segregation process and enables monitoring of bin status in an IoT environment. The SSD MobileNetV2 The ultrasonic sensor monitors the waste fill percentage, and a GPS module obtains the real-time latitude and longitude. The LoRa module on the smart bin sends the status of the bin to the LoRa receiver at 915 MHz. The electronic components of the smart bin are protected with RFID based lockers, where only the registered RFID tag can be used to unlock for maintenance or upgrading purposes.
IoT based solid waste management system for smart city	**Krishna Nirde** **Prashant Mulay** • College of Engineering, Pune **Uttam M. Chaska**	This paper improves practicality of IoT based solid waste collection and management system for smart city.The integrated sensing system is designed using ultrasonic sensor and load cell to offer a proficient and automatic dustbin status monitoring system. Still there is good scope for improvement in algorithms which synthesize bin operative situations, its status, time threshold and loaded status perception. Optimizing power required for the system would also be a challenge. Numbers of test runs were performed for assessment of proposed system