**SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES**

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| **S.NO** | **PAPER TITLE** | **AUTHOR NAME** | **PROJECT DESCRIPTION** | **DRAWBACKS** | **IDEA** |
| **1.** | IOT based smart waste anagement system in city | Sana bagban,  Hemant tirmare | In this paper, we are going to discuss about the waste management system. As we see that in our surrounding and in the public places the waste is not collected and not even dumps properly where the dustbins are overflowing due to more amount of waste storage which leads to many illness to human. Hence to avoid a situation we are planning to design a ”IOT based waste management for smart cities ” Internet of things(IOT) consist of collection of data and analysis which can be used in many other domains and use to operate more efficiently . Device such as RFIDS , sensors and actuators are embedded and collect the information. in this paper it is not only used to collect the waste but also used to disposal it to a proper location with the help of waste collecting vehicle .One of the most challenging issue-municipal wastes collection within smart city | We monitoring and managing the solid waste system using RIFD, GSM it will only able to maximize waste collection but not any action about uncollected waste. As the lid of the bin is been open it increases large number of insects which breed on it | RIFD sensors and actuators to collect the information of garbage level |
| **2.** | Smart waste collection monitoring and alert system via IOT | Zainal Hisham che soh, Mohamad Azeer Ai-Hami husa , Syanrul AFZALche abdullah , Mohad affandi shafie | The uncollected waste material when the waste bin is full is a common problem nowadays. Thus, an essential in ensuring a clean and green surrounding environment. This paper presents an Internet of Things (IOT) based smart waste collection Monitoring and alert system to monitor the waste material at the selected site of garbage collection area. The system is implemented using an ultrasonic sensor which is connected to  Arduino UNO as to monitor waste bin garbage level. In this system, waste bin depth level will be sent via Arduino Ethernet shield with an internet connection to the Ubidots IOT cloud. The Ubidots store the collected waste bin level data into IOT database and display the waste bin depth level on online dashboard for real-time visualization. The Ubidots Event manager invoke a notification alert to garbage collector mobile phone via a SMS when the waste bin is nearly filled for immediate waste collection .Therefore, the waste collection became more effective and systematic. | The problem occur when there is no proper management for waste collection. | Using ultrasonic sensors to finding the filled level of garbage , alert message |
| **3.** | Smart city waste management system using Internet of Things and cloud compu ting | Pallavi K N ,Dr Ravi Kumar V, Chaithra B M | At present solid waste management is a major concern in the metropolitan cities of the developing and developed countries. This huge unmanaged accumulation of garbage is polluting the environment, spoiling the beauty of the area and also leading to the health hazard. In this era of Internet, IOT (Internet of Things) can be used effectively to manage this solid waste. In this paper, we have discussed GPRS, RIFD, HCT, LCT and the definition of Internet of Things and dynamic routing algorithm. | dynamic scheduling depending on the k-value, CPU overhead cost is high  waste from various bin | Algorithm to find the cost optimal routes for trucks, roll on-roll off routing mechanism |
| **4.** | IOT enabled smart waste Bin with real time monitoring for efficient waste management in metropolitan cities | Manju Mohan,  Kuppan chetty Ramanatan | Waste are part of our lives for decades and due to improve waste dumping , collection and management.  Therefore in this paper ,design of a waste bin with real time monitoring its 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 monitor the level of the bin in real time and communicate to the central cloud where the bin the connected | System requires more number of waste bin for separate waste collection as per pollution in the city. The results into high initial cost due to expensive smart dustbin compare to the other methods. | Capacitance sensor in bin monitor the level and send the data to central cloud |
| 5 | Solid waste management model | Ahmad Gamal,  Ova Candra Dewi | Solid waste management models are created to solve waste problems in different aspects and areas. Many models were makes to tackle waste problems in cities or metropolitan areas .Yet there are no specific solid waste management models that are made specifically for villages that undergo a transition to a city and it is affecting both natural and social environment in the areas. | The process is not always cost effective. The resultant product has a short life. As management can causes more problem. | Smart waste bins, garbage truck weighing machine. |