

# SMART WASTE MANAGEMENT SYSTEM

## Literature Survey:

### Introduction:

Now a days Internet of things and its applications have become an essential way part of today human life. It has turned into a fundamental tool in each angle. Regularly, the metropolitan or corporation specialists keep up clean garbage bins at particular places in the local zones where the occupants are told to arrange their family wastage. In spite of the fact that the specialists are told to gather up the wastage inside a particular day, they wind up clearing them following few days when, the dustbins begin once again flooding and noticing. Along these lines, corruption of the waste likewise causes bacterial and infections to develop, accordingly influencing the general good health. For the reason strong waste administration happens by observing the step-by-step accumulation and transfer prepare with IoT based system proposed. The everyday observing of waste gathering process utilizing android application is created. The vigorous method for dealing with the waste, help in diminishing time taken to gather and arrange strong waste. The essential objective of strong waste administration is decreasing and taking out unfavourable effects of waste materials on human good health and condition to bolster financial improvement and good personal satisfaction.

### References:

SI NO	TITTLE	Authors	Abstract	Drawbacks
1.	<b>SMART GARBAGE DUSTBIN</b>	Shephali Rakhunde, Shreya Ghavghave, Shraddha Jagtap.	We have to develop an automatic dustbin which will detect the garbage is dry or wet then separate the garbage and informs about the level of garbage collected in the garbage bin to a person in the garbage collecting vehicle and by using vending machine coins comes out the smart dustbin. This system helps to city clean and green. There is a new garbage collecting way to dispose the waste by using the help of these sensors' authorities can get	<ul style="list-style-type: none"><li>• Expensive</li><li>• Practically Heavy Work load,</li><li>• The employee doesn't know whether the bin is filed.</li></ul>

			<p>information about the bin is over flowing by the information given by sensor then they can easily find out the bin in which located and squash it as early possible. When garbage throw in dustbin. motor rotate according sensor and then wet and dry garbage is separated. A conveyer belt rotates and comes out coins.</p>	
2	<b>Smart Bin Implementation for Smart Cities</b>	Narayan Sharma, Nirman Singha, Tanmoy Dutta	<p>As we know, the large bins are present in each locality and serve as the centre point of garbage of that particular locality. The garbage collection team collects the garbage from these central bins in their trucks. Our model of hardware is going to be applied in these central bins and thus making them smart bins. For this we have divided the dustbin into three different levels according to the level of garbage filled. Accordingly, the text messages indicating the levels are being sent to the central office, which acts as a data warehouse for all the level data being sent by the different bins. The central office of waste management department now will be able to track the level of every dustbin getting filled up just by sitting in their office at real time. This information will now guide them efficiently to take up the action of sending the trucks to empty the dustbin whose levels are significant. The hardware has used some very basic electronic components to make out the complete system at the best possible cost. The built hardware can be implemented at any dustbin irrespective of</p>	<ul style="list-style-type: none"> <li>• Can't implement in Individual Streets</li> <li>• The Truck Employee can wait for the message from Main center.</li> </ul>

			its size and height and thus is portable with any bins.	
3		Vipin Jais, Tushar Bhanarkar, Kunal Karkade, Nikhil Kare, Kuldeepak Satekar	<p>The proposed IOT based Smart Waste Bin Model consist of Data Gathering Layer (DGL), Data Processing Layer (DPL) and Data Demonstration Layer (DDL). As shown by the following figure, the Data Gathering Layer (DGL) consists with different types of sensors used to take the measurements from the waste bin. The sensor readings taken by the Data Processing Layer (DPL) which uses a micro controller (Raspberry Pi module) for the processing. According to the logics defined, the Smart Bin Model will make predictions about the temperature level, humidity level and the capacity of the waste bin. The MQTT protocol, handles the message transmission between the micro controller sub system and the dash board. The Data Demonstration Layer (DDL) consists with Alert Notification Sub System and a Dash Board. The Alert Notification Sub System (ANS) consists with different types of indicators which show the temperature level, humidity level, remaining waste bin capacity level and a sound buzzer to alert the waste collecting parties about the status of the waste bin. The Dash Board visualizes the sensor measurements and the notifications to the authorized parties.</p>	<ul style="list-style-type: none"> <li>• We cannot assure the employee always in office to monitor the details.</li> <li>• The estimation of cost also high.</li> <li>• The Methods always to implementation and execution is tough.</li> <li>• The maintenance also High cost.</li> </ul>