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<i>Project name:</i>	<i>Smart Waste Management System For Metropolitan Cities</i>
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Paper-1

ABSTRACT

In this paper, a system is introduced to manage waste in big cities effectively without having to monitor the parts 24×7 manually. Here the problem of unorganized and non-systematic waste collection is solved by designing an embedded IoT system that will monitor each dumpster individually for the amount of waste deposited. Here an automated system is provided for segregating wet and dry waste. A mechanical setup can be used for separating the wet and dry waste into separate containers here sensors can be used for separating wet and dry. For detecting the presence of any waste wet or dry can be detected using an IR sensor in the next step for detecting wet waste a moisture sensor can be used. In this process, if only IR is detected motor will rotate in the direction of the dry waste container if both the sensor detects the waste then it will go to the wet container. Both these containers are embedded with ultrasonic sensors at the top, the ultrasonic sensor is used for measuring distance. This makes it possible to measure the amount of waste in the containers if one of the containers is full then an alert message will be sent to the corresponding person.

ADVANDAGE:

#1 Time-saving ;

By having a more convenient route garbage trucks spend less time on the road, therefore, congestion in smart cities can be decreased. This means that truck drivers and

citizens are saving less time stuck in traffic jams. Additionally, using IoT technology for remote diagnostics also means not having to send staff all the way to monitor assets.

#2 Cost-saving ;

With the huge increase in waste, more resources are allocated to waste collection and handling. If unnecessary collections are eliminated, public spending on waste management can be reduced

#3 Sustainability ;

Overflowing bins will pollute the environment potentially contaminating areas and harming the general health of the public. An optimized route and system for waste collection will eliminate this risk as well as improving air quality and minimizing CO2 emissions. Smart cities can reduce their overall carbon footprint, bringing them closer to achieving the SDG goals.

DRAWBACKS:

1. According to the author there may be several disadvantages such as increasing cost of the dustbin

The process is not always cost-effective: ...

The resultant product has a short life: ...

The sites are often dangerous: ...

The practices are not done uniformly: ...

Waste management can cause more problems:

Paper-2

Abstract:

Indiscriminate disposal of solid waste is a major issue in urban centers of most developing countries and it poses a serious threat to healthy living of the citizens. Access to reliable data on the state of solid waste at different locations within the city will help both the local authorities and the citizens to ef-

fectively manage the menace. In this paper, an intelligent solid waste monitoring system is developed using Internet of Things (IoT) and cloud computing technologies

ADVANTAGE:

#1 Improving efficiency ;

Smart cities are all about using resources efficiently – achieving more by using less input. One of the benefits includes the availability of real-time data, allowing for decisions to be made quickly. This means that action can be taken before having an overflow of containers. Smart cities can remain highly responsive and challenge the current waste hierarchy, breaking patterns of inefficiency and high costs

#2 Transparency

By routes being monitored, the opportunity of the misuse of owned assets is eliminated.

Drawbacks:

1. System requires more number of waste bins for separate waste collection as per population in the city.
2. This results into high initial cost due to expensive smart dustbins compare to other methods.
3. Sensor nodes used in the dustbins have limited memory size.