Smart Waste management in Metropolitan cities

IDEA I :

Abstract

Waste is an important issue, which needs to be tackled smartly. The main purpose of this paper is to develop the system which uses the information collected from sensors to manage the waste collection. In proposed system, Smart waste Dustbins are located in several areas of city are connected to Internet wirelessly, they equipped with sensors which collects the data about level of collected waste in Smart waste Dustbin.

Then Smart waste Dustbin sends this information to central web portal using WIFI module. If the Smart waste Dustbin is filled up to its threshold value then the message is displayed on web portal and the responsible authority take proper action and it will shows the all information on to the Smart waste Dustbin Application on the users mobile phone

Advantage :

Main advantage of this system is that it will stop the overflowing of garbage near the dustbin by sending alert before it gets full.

It will decrease the irresponsibility of the cleaning department of not cleaning the local dustbins regularly.

It will help to decrease the pollution and disease which will be spread if there will if Overflowing of garbage on the roads.

Disadvantage:

We cannot say it as a disadvantage but the Arduino and the sensors should always be ON for better working.

Very less but use of electricity to keep it always on.

IDEA II:

Abstract

The traditional way of manually monitoring garbage bins is a cumbersome process and utilizes more human effort, time and cost which can easily be avoided with present technologies. In order to handle such issues, we propose an IOT based smart waste management system which checks the waste level over the dustbins by using sensors. The ultrasonic sensors are interfaced with Arduino Uno 3 Microcontroller to obtain and send the level of garbage to the server of concerned authority after waste is filled up to particular level.

Then authority can take required action by employing a worker to empty out the bins. So through this system, the real-time status of waste is monitored. Therefore one can ensure proper management of waste and this can be a step towards a quality environment which ultimately bodes well for human beings and other life-forms.

Advantage:

Our system is designed to crack this issue and will offer complete details of the dustbins located in different areas throughout the city.

The Allocated authority can access the information from anywhere and anytime to get the details.

Its affordable to many people as its price is low

Disadvantage:

Proper awareness should be created among the public before it is implemented on a large scale.

Otherwise, sensitive devices like sensors might be damaged due to the rough action of the users.

IDEA III

Abstract:

This Waste management is one of the serious challenges of the cities, the system now used in cities, we continue to use an old and outmoded paradigm that no longer serves the entail of municipalities, Still find over spilled waste containers giving off irritating smells causing serious health issues and atmosphere impairment.

The Smart Waste Management System will simplify, with the Web applications and mobile phone, the solid and hydric waste inspecting process, and the management system of this presentation's total collection process. The proposed system is a GPS based. The suggested device and implementation will track waste storage and monitor the vehicle's waste driver. This method helps to make the customer aware of accountability behind the job such as the system for solid waste inspection and management, integrating communications technology for truck control systems such as GPS.

Advantage:

The prototype consists of smart bins with RFID tags, garbage collector vehicle tracking using GPRS module, and the User App apart from this there is another side of the prototype is the Admin Panel where the admin can have track of all the details in one go and able to generate the report on the daily basis

Disadvantage

The bulk of the waste comes from the private industries and recycling in the metropolis is technically not officially carried out.