Smart Waste Management System for Smart City

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Abstract:

In the present-day scenario, we often see that the garbage bins or dustbins located in public places are overflowing. This leads to the spread of some deadly diseases and causes human illness. We use the framework for the garbage control and management in smart cities that incorporates the Internet of Things. In every smart city, garbage bins are located in several areas, and wireless trash bins are connected to the web-based application, which is the admin panel. Dustbins are equipped with ultrasonic sensors that collect data on the amount of waste collected within the bin. It will sense the level of the dustbin; if the level of the dustbin is full, then it will send the message to the admin portal. After that the admin panel will assign the vehicle to driver to collect the garbage from that area, and the android application will be used by the user to find a nearby garbage collection bin. With the help of remote diagnostics and Internet of Things, there is no need to send the staff all the way to monitor the fill levels of the bins. The use of smart bins in cities can challenge the current waste hierarchy, breaking the patterns of high costs and inefficiency, which can ultimately improve the overall performance of the waste management systems. This also result in less congestion on the streets, lower CO_2 emissions and lower fuel consumption. This solution to the given problem that is E-bins on an Internet of Things based platform is perfect for areas with a large volume of human traffic, such as malls, parks etc.