



**Bahria University**  
Discovering Knowledge

## **FINAL YAER PROJECT REPORT**

# **IOT BASED SMART GARBAGE MONITORING SYSTEM**

**By**

**HAFIZ ABBAS MANSOOR (27113)**

**ADIL AHSAN ALI (27083)**

**AIJAZ AHMED SHAIKH (27088)**

**ASAD KAMRAN SHAH (27095)**

**SHARIQ HUSSAIN KAZMI (27261)**

**SUPERVISED BY**

**(MR. BILAL MUHAMMAD IQBAL)**

**BAHRIA UNIVERSITY (KARACHI CAMPUS)**

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# IoT BASED SMART GARBAGE TRACKING SYSTEM

## ABSTRACT

With the paradigm shift toward Internet of Things (IoT), researchers and IoT services have been conducted in a wide range of fields. As a major application field of IoT, waste management has become one such field. Furthermore, the IoT includes various IoT technologies that can monitor and increase the battery lifetime through two types of energy-efficient operations of the SD-WAN, smart waste collection and computer-aided operations. The goal of this project is to

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## IoT BASED SMART GARBAGE TRACKING SYSTEM

### ABSTRACT

Owing to a paradigm shift toward Internet of Things (IoT), researches into IoT services have been conducted in a wide range of fields. As a major application field of IoT, waste management has become one such issue. Furthermore, the SGS includes various IoT techniques considering user convenience and increases the battery lifetime through two types of energy-efficient operations of the SGBs: stand-alone operation and cooperation-based operation. The object of this project is to develop a project that is both hardware and software dependant, capable of sensing the levels of garbage in garbage cans and generate alerts to the authorities responsible for trash collection. Many times, in our city we see that the garbage bins or dustbins placed at public places are overloaded. It creates unhygienic conditions for people as well as ugliness to that place leaving bad smell. To avoid all such situations we are going to implement a project called IoT Based Smart Garbage and Waste Collection bins. These dustbins are interfaced with microcontroller based system having IR wireless systems along with central system showing current status of garbage, on mobile web browser with html page by Wi-Fi. Hence the status will be updated on to the html page. Major part of our project depends upon the working of the Wi-Fi module; essential for its implementation. The main aim of this project is to reduce human resources and efforts along with the enhancement of a smart city vision. Ordinarily, in our city we see that the trash receptacles or dustbins put at open spots are over-burden. It makes unhygienic conditions for individuals and in addition offensiveness to that place leaving awful stench. To maintain a strategic distance from all such circumstances we will actualize a task called IoT Based Smart Garbage Monitoring System. These dust bins are interfaced with microcontroller based framework having Ultra sonic sensors with remote frameworks alongside focal framework demonstrating current status of rubbish, on portable web application with associated by means of GSM Module. Consequently the status will be refreshed on to the application progressively. Real piece of our undertaking relies on the working of the GSM module; basic for its execution. The primary point of this venture is to diminish HR and endeavors alongside the improvement of a brilliant city vision, which would ultimately lead to nation's prosperity.

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