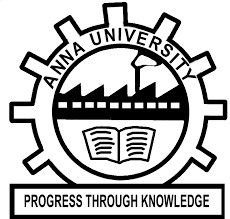
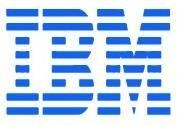
**KONGUNADU COLLEGE OF ENGINEERING AND TECHNOLOGY**



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# Department of Electronics and Communication Engineering

***SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES***

**Domain of the Project :IOT**

|  |  |
| --- | --- |
| **Batch ID** | **: B2-2M4E** |
| **Team ID** | **:PNT2022TMID46042** |
| **AcademicYear** | **: 2022-2023** |
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# Objectives

* The objective of solid waste management is **to reduce the qua ntity of solid waste disposed off on land by recovery of mat erials and energy from solid waste** as depicted.
* The GPS coordinates of the garbage bin will be sent to the IB M IoT platform.
* The location of the bins along with bin status can be viewed in the Web Application.

# Abstract

* The Internet of Things (IoT) paradigm plays a vital role for impr oving smart city applications by tracking and managing city proc esses in real-time.
* One of the most significant issues associated with smart city app lications is solid waste management, which has a negative impac t on our society’s health and the environment.
* This work proposes an IoT-enabled solid waste management syst em for smart cities to overcome the limitations of the traditional waste management systems.

# Introduction

* The Internet of Things (IoT) is a concept that refers to the ever-expanding network of internet-connected devic es that are currently in use all over the world.
* IoT plays a pivotal role in enhancing smart city applic ations through real-time monitoring and management of city processes.
* One of the biggest challenges associated with smart c ity applications is solid waste disposal, which impacts our society’s health and nature.
* By 2050, global waste is estimated to reach 3.40 billi on tons, more than doubling population growth over t hat period .

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| --- | --- | --- | --- |
| **TITLE** | **AUTHOR**  **&**  **YEAR** | **JOURNAL NAME** | **REMARKS** |
| Smart Waste Man agement System  Using IOT | S.A.Mahajan  &  2017 |  | This project shows how the smart w aste management system using IOT cam be implemented. This proposed system assures the collection of gar bage level reaches its maximum lev el. Thus, dustbins will be cleared as and when filled, giving way to clean er city. |
| Smart Waste Man agement System  Using IOT | Tejashree Kad us  &  2020 |  | Improper disposal and improper mai ntenance of domestic waste create is sues in public health and environme nt pollution thus this paper attempts to provide practical solution toward s managing the waste collaborating using IOT. 4 |

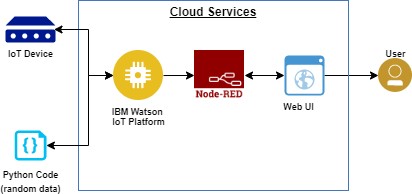
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| **TITLE** | **AUTHOR**  **&**  **YEAR** | **JOURNAL NAME** | **REMARKS** |
| Garbage Managi ng System Using  IOT | Asha and Bala murugan&  2019 |  | This model creates awareness about how hygiene of our surrounding gar bage cans is important. It also helps in segregating dry and wet waste & also helps in checking the toxicity le vel of the waste further simplifying t he municipality work of collecting g arbage . |
| Automation of S mart Waste Man  agement Using I  OT | Madhuri Moh  are  &  2019 |  | Here using a one variable voltage so urce & set -250v as a threshold value By varying voltage below threshold value we got output on virtual termi nal that is dustbin is not full.  5 |

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| **TITLE** | **AUTHOR**  **&**  **YEAR** | **JOURNAL NAME** | **REMARKS** |
| IOT Adoption bar riers of smart citi  es waste manage ment | Manu Sharma  &  2020 |  | Waste management of smart cities is considered to be the most important issue in developing countries over t he past decades. A review of existin g literature revealed fifteen IOT of s mart cities waste management. |
| IOT Technologie s Based Smart W aste Collection | Brucu Oralha n and Yavuz  Yigit  &  2016 |  | Our presented smart waste manage ment system can be improved by usi ng some other knowledge such as a garbage container area population, u sing future garbage container fill lev el estimation.  6 |

# Problem Identification

* Some trash bins are overfilled while others are underfilled by t he trash collection time.
* Overfilled trash bins create unhygienic conditions.
* Unoptimized truck routes result in excessive fuel usage and en vironmental pollution.
* All collected trash is combined which complicates sorting at th e recycling facility.

# Block Diagram



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# THANK YOU

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