## **LITERATURE SURVEY**

## SMART WASTE MANAGEMENT SYSTEM

## **FOR**

## **METROPOLITAN CITIES**

| S.NO | PAPER   | AUTHOR                | YEAR         | METHOD<br>AND<br>ALGORITM  |
|------|---|-----------------------|--------------|--|
| I.   | Smart City Governance in Developing Countries | SY Tan,<br>A Taeihagh | January 2020 | The idea is based on smart city for developing cleanliness. The review found that technology-enabled smart cities in developing countries can only be realized when concurrent socioeconomic, human, legal, and regulatory reforms are instituted.  Governments need to step up their efforts to fulfil the basic infrastructure needs of citizens, raise more revenue, construct clear regulatory |

|   |  |  | Name             | frameworks to mitigate the technological risks involved, develop human capital, ensure digital inclusivity, and promote environmental sustainability. A supportive ecosystem that encourages citizen participation, nurtures startups, and promotes public—private partnerships needs to be created to realise their smart city vision. |
|---|--|--|------------------|---|
| 2 | The future of waste management in smart and sustainable cities | Behzad Esmaeilian, BenWang, KemperLewis FabioDuarte, CarloRatti, Sara Behdad | November<br>2018 | The potential of smart cities and connected communities in facilitating waste management efforts. waste management system is proposed, where three interconnected elements are  |

discussed:1. an infrastructure for proper collection of product lifecycle data to facilitate full visibility throughout the entire lifespan of a product, 2. a set of new business models relied on product lifecycle data to prevent waste generation, and 3.an intelligent sensor-based infrastructure for proper upstream waste separation and on-time collection. The proposed framework highlights the value of product lifecycle data in reducing waste and enhancing waste recovery and the need for connecting waste management practices to the whole product life-cycle. An

|   |  |                               |               | example of the use of tracking and data sharing technologies for investigating the waste management issues has been discussed   |
|---|--|-------------------------------|---------------|---|
| 3 | Real-time smart garbage bin mechanism for solid waste management in smart cities | Dominic Abuga,<br>N S Raghava | December 2021 | This paper focuses on a real-time smart garbage bin mechanism for solid waste management in smart cities. The mechanism proposed accesses real-time information of any smart garbage bin deployed across the city and helps to resolve the problem of waste overflow from garbage bins and keep the smart cities clean. Fuzzy logic is applied in the strategic deployment of smart garbage bins across the smart cities. The system is |

|   |  |                 |              | implemented on Net-logo which is widely used in multi-agent modelling environments. The significant advantage of the system is its novelty in real- time decision- making and real-time monitoring using the fuzzy logic process.  |
|---|--|-----------------|--------------|--|
| 4 | Smart Waste<br>Management<br>under Smart City<br>Mission | Priyanka Mokale | October 2019 | Smart waste management helps to reduce the waste, create waste to energy source also it helps to keep the environment clean and neat. Its main way to show the difference between small-town waste management and Metropolitan cities challenges and how to manage it and then gave the recommendation for solid waste |

|            |   |  |               | management improvement.   |
|------------|---|--|---------------|---|
| was<br>mar | based solid<br>ste<br>nagement<br>ution | Kellow Pardini, Joel J. P. C. Rodrigues, Sergei Kozlov, Neeraj kumar | December 2018 | A review analysis of waste management models available in the literature is performed in detail in this paper. Then, a deep review is undertaken of the related literature based on IoT infrastructure for efficient handling of waste generated in urban scenarios, focusing on the interaction among concessionaires and waste generators (citizens) from the perspective of a shorter collection time with reduced costs, as well as citizenship promotion. An IoT-based reference model |

|   |                                  |  |               | is described, and a comparison analysis of the available solutions is presented, with the goal to highlight the most relevant approaches and identify open research issues on the topic   |
|---|----------------------------------|--|---------------|---|
| 6 | Smart waste management using IOT | V.Pavan sankeerth, V.Santhosh<br>Markandeva, E.sriRanga &v.Bhavana | November 2019 | It is seen that a large portion of the trash across the roadside are over loaded because the waste is not gathered intermittently. In this technique the bins are equipped with ultrasonic sensors to measure the garbage level and sends this data to a server using micro controller with Wi-Fi technology over internet. The server monitors the garbage bins that are |

| T - 1            |
|------------------|
| spread across    |
| the city at      |
| multiple         |
| locations. The   |
| system notifies  |
| the garbage      |
| truck driver     |
| when the         |
| garbage has to   |
| be removed       |
| based on the     |
| garbage level of |
| the bin. The     |
| server sends     |
| SMS to the       |
| assigned mobile  |
| number which     |
| provides a route |
| to the driver    |
| based on all the |
| data collected   |
| from bins. This  |
| system makes     |
| waste            |
| management in    |
| metropolitan     |
| cities more      |
| efficient.       |