

SMART WASTE MANAGEMENT

LITERATURE SURVEY :

S.No	Paper name	Author name	Published year	Abstract
1	Design and Implementation of Smart Home Control Systems Based on Wireless Sensor Networks and Power Line Communications	Mingfu Li; Hung-Ju Lin	10 December 2014	Wireless sensor networks (WSNs) and power line communications (PLCs) are used in this work to implement a smart home control network. The goals are to reduce the impact of wireless interference on a smart home control network and the unnecessary energy consumption of a smart home.
2	Design of smart bin for smarter cities	Hitesh Poddar; Rituraj Paul; Sourangsu Mukherjee; Budhaditya Bhattacharyya	04 January 2018	A smart city is incomplete without a Smart Waste Management System and in this paper, we have presented an Integrated Platform for Waste Management where smart bins are equipped with a network of sensors and transmit real-time data indicating the fill percentage of the bin.
3	Status and challenges of municipal solid waste management in India: A review	Rajkumar Joshi; Sirajuddin Ahmed; Carla Aparecida Ng	17 February 2016	The study concludes that the installation of decentralized solid waste processing units in metropolitan cities/towns the and development of a formal recycling industry sector is the need of the hour in developing countries like India
4	IoT Enabled Smart Waste Bin with Real-Time Monitoring for efficient waste management in Metropolitan Cities	Manju Mohan; Kuppan Chetty Ramanathan; Vijayram Sriram; Mohd Azeem; P Vishal; G Pranav	30 September 2019	The capacitance sensor in the bin continuously monitors the level of the bin in real-time and communicates to the central cloud where the bins are connected. The ultrasonic sensor is used to open and close the lid of the bin whenever persons are nearby the bin.

5	An approach for monitoring and smart planning of urban solid waste management using the smart-M3 platform	Vincenzo Catania; Daniela Ventura	07 August 2014	The context of smart waste management requires interconnection among heterogeneous devices and data sharing involving a large number of people. Waste collection is made by real-time monitoring of the level of the bin's fullness through sensors placed inside the containers.
6	Concept, Design, and Implementation of Automatic Waste Management System	Adil Bashir, Shoaib Amin Banday, Ab. Rouf Khan, Mohammad Shafi	31 July 2013	The system consists of four main subsystems namely Smart Trash System (STS), Local Base Station (LBS), Smart Vehicle System (SVS), and Smart Monitoring and Controlling Hut (SMCH). The proposed system would be able to automate the solid waste monitoring process and management of the overall collection process.
7	IoT-Based Solid Waste Management Solutions: A Survey	Kellow Pardini ; Joel J. P. C. Rodrigues; Sergei A.Kozlov; Neeraj Kumar; Vasco Furtado	1 January 2019	The Internet of Things (IoT) and cloud computing offer an automation possibility through cyber-physical systems that will change the way solid waste management is performed.
8	Sensor-Based Solid Waste Handling Systems: A Survey	Vishnu Suresh; Jino Ramson; M. S. S. Rukmini; Adnan M. Abu-Mahfouz	18 March 2022	IoT-based systems are superior to other design approaches, and LoRa WAN is identified as the preferred communication protocol for the automation of solid waste handling systems in urban areas.
9	IoT-Enabled Solid Waste Management in Smart Cities	S. Vishnu ; S. R. Jino Ramson; Samson Smith; Theodoros Anagnostopoulos; Adnan M. Abu-Mahfouz;	14 July 2021	An intelligent Graphical User Interface (GUI) enables the waste collection authority to view and evaluate the unfilled status of each trash bin.

10	Applications of the Internet of Things (IoT) in Smart Logistics: A Comprehensive Survey	Yanxing Song; F. Richard Yu; Li Zhou; Xi Yang; Defang He	28 October 2020	As one of the important technologies of modern information and communication technology (ICT), the Internet of Things (IoT) can create oceans of data and explore the complex relationships between the transactions represented by these data with the help of various mathematical analysis technologies.
11	Smart waste management system	Shyamala S.C, Kunjan Sindhi, Vishwanath Muddy, Chitra C N	September 2016	The information from bins to the authorized number is sent using communicating modules (GSM/GPRS module). The entire operation is controlled using an Atmega328P 8-bit microcontroller. This report showcases a potential design for an IoT gateway that can be used to provide a framework for a smart waste management system.
12	Designing an integrated municipal solid waste management network: A case study	Arsalan Yousefloo; Reza Babazadeh	October 2019	Traditional waste disposal methods bring many problems, such as air pollution, groundwater contamination, soil contamination, and greenhouse gas emissions, and endanger the infrastructure of communities. Optimal waste management reduces waste production, social and environmental problems associated with waste
13	Optimal planning of municipal solid waste management systems in an integrated supply chain network	Maryam Mohammadi; Sirkka-Liisa JamsaJounela; I. Harjunkoski	April 2019	Waste management can be considered as a strategic supply chain problem as it involves waste generation, collection, separation, transportation, treatment, distribution, and disposal.

14	The impact of an efficient collection sites location on the zoning phase in municipal solid waste management	Gianpaolo Ghiani; Andrea Manni; Emanuele Manni; Massimiliano Toraldo	June 2014	Computational results on data related to a real-life instance show that an efficient location is fundamental in achieving consistent monetary savings, as well as a reduced environmental impact. These reductions are the result of one vehicle less needed to perform the waste collection operations, and an overall traveled distance reduced by about 25% on average.
15	Models and Algorithms for the Integrated Planning of Bin Allocation and Vehicle Routing in Solid Waste Management	Vera C. Hemmelmayr; Karl F. Doerner; Richard F. Hartl; Daniele Vigo	January 2012	The problem of designing a collection system consisting of the combination of a vehicle routing and a bin allocation problem in which the trade-off between the associated costs has to be considered.
16	International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC)	K. N. Fallavi, V. R. Kumar and B. M. Chaithra, "Smart waste management using Internet of Things.	2017	The Objectives of the paper, as the population is growing, the garbage is also increasing. This huge unmanaged accumulation of garbage is polluting the environment, spoiling the beauty of the area and also leading to health hazards. In this era of Internet, IOT (Internet of Things) can be used effectively to manage this solid waste. In this paper, we have discussed the definition of Internet of Things and its elements, testing and prototyping tool cooja simulator and finally the study of various literatures available on smart waste management systems using IOT.

17	IoT-Enabled Solid Waste Management in Smart Cities	S. Vishnu , S. R. Jino Ramson, Samson Senith , Theodoros Anagnostopoulos, Adnan M. Abu-Mahfouz, Xiaozhe Fan, S. Srinivasanand A. Alfred Kirubaraj	14 July 2021	The development and validation of a hybrid network architecture approach to efficiently manage trash bins in public places and residential areas of cities were discussed in this paper. All facets of an IoT system have been developed, including the design of end nodes, i.e., PBLMU and HBLMU; long-range data transmission with LoRa network for public places and Wi-Fi connectivity for homes; long-term data storage; and hierarchical visualization of trash bin level with the intelligent GUI. According to the obtained results, the proposed IoT-enabled solid waste management system is well.
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