Smart Dustbin using Arduino

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Abstract*: A smart dustbin employing Arduino is a novel solution aimed at enhancing waste management efficiency. By Integrating sensors and microcontrollers, it can detect the level of garbage in the bin and notify users when it needs emptying. The main goal of the project is to create a smart vacuum cleaner that will help keep our environment clean and safe. Nowadays, technology is becoming more and more smart and we create a smart trash can using Arduino to clean the environment. This smart bin management system is made by a microcontroller based system with ultrasonic sensors installed on the bins. Arduino understands this problem and sends a signal to the servo motor, which opens the lid at the top of the chamber.*

REFERENCES

[1]. K Vidyasagar, M Sumalatha, K Swathi, M Rambabu, "Ecofriendly Environment with RFID Communication Imparted Waste Collecting Robot", Journal of Academia and Industrial Research (JAIR), vol. 4, issue 2, pp. 43 - 47, 2015.

[2]. Twinkle Sinha, Mugesh Kumar, P Saisharan, "Smart Dustbin", International Journal of Industrial Electronics and Electrical Engineering, vol. 3, issue 5, pp. 101 - 104, 2015.

[3]. M T H Shubho, M Hassan, M R Hossain, M N Neema, "Quantitative Analysis of Spatial Pattern of Dustbins and its Pollution in Dhaka City--A GIS Based Approach", Asian Transactions on Engineering, pp. 1 - 7, 2013.

[4]. A. Tripathi, C. Pandey, A. Narwal, and D. Negi, "Cloud Based Smart Dustbin System for Metro Station,", Proc. International Conference On Internet of Things: Smart Innovation and Usages (IoT-SIU), pp. 1-4, 2018, doi:10.1109/IoTSIU.2.

[5]. D. Vishwajit, B. Karan, S. Sairaj, D. Abhishek, and R. Gaikwad, "Smart Dustbin for Smart City," International Research Journal of Engineering and Technology (IRJET), vol. 06, issue 4, 2019, pp. 2985-2987.

[6]. S. Murugaanandam, V. Ganapathy, and R Balaji,"Efficient IoT Based Smart Bin for Clean Environment," Proc. International Conference on Communication and Signal Processing (ICCSP), IEEEXplore Digital Library, 2018, pp. 0715- 0720, doi: 10.1109/ICCSP.2018.8524230.