**ACKNOWLEDGEMENT**

We are grateful to our respected guide and Head of the Department **Shri V. P. Mahatme** for his kind, disciplined, invaluable guidance allowing us to use all facilities that are available in the Department during this project which inspired us to solve all the difficulties that came across during completion of project.

Our sincere thanks are due to **Dr. B. Ram Rathan Lal**, Principal, for extending all the possible help and allowing us to use all resources that are available in the Institute.

We are also thankful to our **Family** members and **Friends** for their valuable corporation and standing with us in all difficult conditions.

Project-mates

**ABSTRACT**

In the recent decades, urbanization has increased tremendously. At the same phase there is an increase in waste production. Waste management has been a crucial issue to be considered. As people are getting smarter so are the things. While the thought comes up for smart cities there is a requirement for smart waste management. The idea of smart dustbin is for the smart buildings, colleges, hospitals and bus stands. The smart dustbin thus thought is an improvement of normal dustbin by elevating it to be smart using sensors and logics. Smart dustbin is a new idea of implementation which makes a normal dustbin smart using Infrared (IR) sensors for garbage level detection and antitheft mechanism. The ultrasonic sensor and servo motor are used for opening the dustbin. Internet of Things (IoT) based smart garbage management system has been developed as a prototype where infrared sensor fitted in bin for monitoring the depth of bin and accordingly once threshold reached alarm and LED triggered for cleaning the bin. In addition, the rate at which bin getting filled is monitored for planning the bin collection dynamically. Also, infrared sensor to indicate status of dustbin so the truck driver of the municipal corporation for the dustbin filled and to be cleaned. Finally, it includes anti-theft mechanism for security purpose.

**Keywords**: infrared sensor, ultrasonic sensor, arduino board, servo motor, breadboard**,** internet of things

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**ABBREVIATIONS**

|  |  |
| --- | --- |
| **Abbreviations** | **Meaning** |
| IoT | Internet of Things |
| IR | Infrared |
| LGPL  USB  IDE | Lesser General Public Licence  Universal Serial Bus  Integrated Development Environment |

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