**TRASH COLLECTING ROBOT USING IOT TECHNOLOGY**

**ABSTRACT:** Robots are designed in human interactive way and they are becoming part of lives. Human power is being saved by replacing it by robots in various fields. Cleaning public places is one such field where more human power is required. Autonomous trash collecting robots have been considered as benchmark for mobile robot design problem. These include several common tasks such as navigation, path planning, object detection and discrimination, obstacle avoidance, task sequencing and often multi-agent coordination. The major public problem faced by many developing countries, especially

in India, is lack of uncollected trash littering the streets, roads, sidewalks, shopping malls, railway and bus stations and many other public places. An autonomous robot can obtain information about its surrounding environment, work for more time without human intervention, move either all or part of itself throughout its operating environment without human assistance, avoid situations that are harmful to humans, public property, or itself

unless those are specified in design specifications. They can also adapt to changing surroundings. Like other machines, these robots need regular monitoring and maintenance for proper performance.

TRASHBOT has an IOT interface with autonomous and manual mode of control. The trash is picked up using robotic arm. The picked up trash is segregated (metallic and non metallic) and dumped into bin attached to the robot which has separate partitions for metallic and non metallic trashes .If the trash bin gets filled it is notified to the person operating the robot as message in the IOT interface.