**Project: Smart\_Bin**

**Introduction:**

The waste products are supposed to be in dustbin. While people are fond of throwing the wastes to roads and surroundings, we are introducing this smart bin to attract the people **use the dustbin.**

This project comes up with a Bluetooth controlled car which carries a bin over it. Whenever a one wants to drop something, **just call it out! Show his hand to the bin** and it will open its mouth to take the trash inside it. And you have your neat and clean environment without having any trouble at all.

**Equipment:**

* Arduino Uno-R3
* Arduino Nano
* Motor driver shield L293D
* Sonar sensor
* Servo motor
* Jumper wires
* Bluetooth module
* Gear motor (4)

**Procedure:**

* We have connected the Motor driver shield to the Arduino Uno R3, Bluetooth module and the gear motors.
* We have developed a mobile app to control the Bluetooth module which establishes a serial communication with the Arduino Uno through Bluetooth module.
* The sonar sensor is connected to the Arduino Nano which is controlling the servo motor. So that whenever the Sonar senses an obstacle the servo moves.
* Then we have gathered all the items together in one frame. Which resulted in a **Smart\_Bin.**

**Future plan:**

* We plan to GPS system which will detect where the user is calling from and reach to him to collect the trash.
* We plan to have a Bin with **Artificial Intelligence** which detects the trash around it.
* We plan to build the bin a Line Follower, which will cover the large areas like shopping malls, school, colleges, universities, large companies, factories

**Conclusion:**

Having a neat and clean environment is our dream. We have initially made this prototype for small areas and small number of people. In future we would like to develop this product to very high quality.