CODE FOR THE SMART DUSTBIN

#include <Servo.h>

Servo servo;

int trigPin = 5;

int echoPin = 6;

int servoPin = 7;

int led= 10;

long duration, dist, average;

long aver[3];

void setup() {

    Serial.begin(9600);

    servo.attach(servoPin);

    pinMode(trigPin, OUTPUT);

    pinMode(echoPin, INPUT);

    servo.write(0);

    delay(100);

    servo.detach();

}

void measure() {

 digitalWrite(10,LOW);

digitalWrite(trigPin, LOW);

delayMicroseconds(5);

digitalWrite(trigPin, HIGH);

delayMicroseconds(15);

digitalWrite(trigPin, LOW);

pinMode(echoPin, INPUT);

duration = pulseIn(echoPin, HIGH);

dist = (duration/2) / 29.1;

}

void loop() {

  for (int i=0;i<=2;i++) {

    measure();

   aver[i]=dist;

    delay(10);

    digitalWrite(10,HIGH);

  }

 dist=(aver[0]+aver[1]+aver[2])/3;

if ( dist<50 ) {

//Change distance as per your need

 servo.attach(servoPin);

  delay(1);

 servo.write(0);

 delay(3000);

 servo.write(150);

 delay(1000);

 servo.detach();

}

Serial.print(dist);

}