**Materials and sensors used during our IoT project:**

**1.Bin**

Used to segregate in between plastic and metal objects.

A picture containing indoor

Description automatically generated

**2. Load Sensor**

Load Sensors have been used to get the weight of the bin to provide data to the dashboard to give indications for the drivers when a bin is full or not.

A picture containing indoor, device

Description automatically generated

**3. Separator**

A separator stand has been used to separate metal and plastic material into different sections of the bin.

A picture containing table, cup, indoor

Description automatically generated Diagram

Description automatically generated with medium confidence

**4. Jumper wire**

Connects two points in a circuit

Diagram

Description automatically generated

**5. Servo Motor**

The servo motor will work in line with the proximity sensor to redirect the added material to its corresponding section with a sequence of rotation.

A picture containing text

Description automatically generated A picture containing text

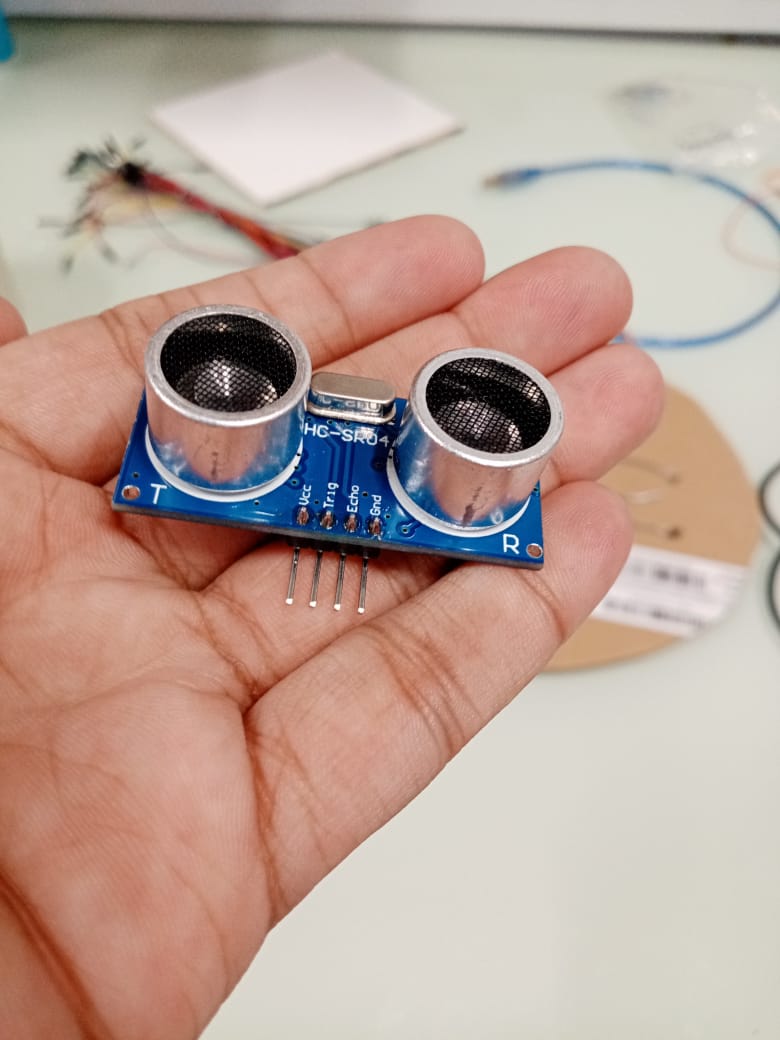
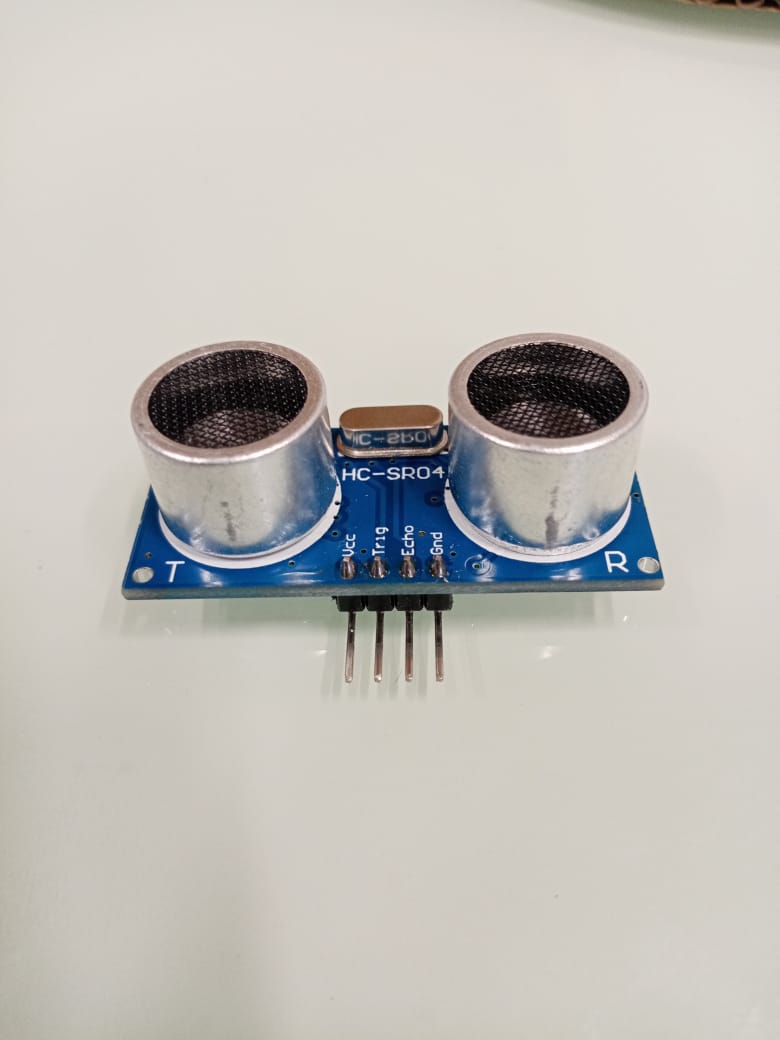
Description automatically generated 

Graphical user interface

Description automatically generated with medium confidence

**6. Ultra-Sonic sensor**

Used to detect the presence of an object when entering the bin, it works along with the inductive proximity sensor when metal objects are detected, and vice versa

**7. Inductive Proximity sensor**

Used for the detection of metallic objects and separation of non-metallic objects.

A close-up of a stethoscope and a pen

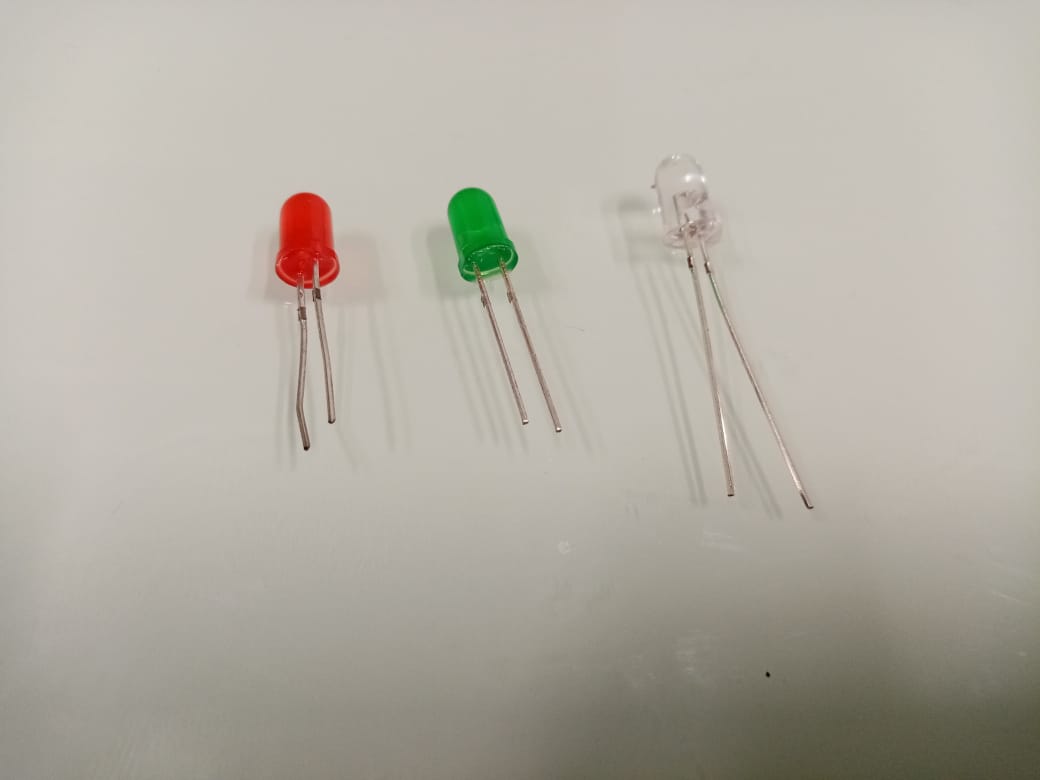
Description automatically generated with low confidence

**8. LED Lights**

Color led lights have been used to provide indications when the bin is empty, full which is a red light, or half full which is green light

Will be placed in front of the bin for easy visibility and uses.

A picture containing hand

Description automatically generated 

**9. Arduino Uno**

The mainboard that we used to connect our circuits and equipment (Much cheaper than the raspberry pie board)

A hand holding a small electronic device

Description automatically generated with low confidence

A picture containing circuit, electronics, cable, connector

Description automatically generated

A picture containing text, electronics

Description automatically generated

**10. Amplifier**

A circuit board with wires

Description automatically generated with low confidence

Diagram

Description automatically generated

**11. Blink app**

We have used blink as our dashboard where the weight will be displayed and monitored.

**12. Soldering Process**

A group of men sitting at a table working on a computer

Description automatically generated with low confidence

A picture containing person, indoor

Description automatically generated

13. Earth Day 22 April 2022

Our team has organized Green Campaign to raise awareness during Earth Day 2022 about recycling and segregation bin usage across Mauritius. We have done some demo testing. This session was very interactive where Parents and students were amazed by our prototype and have given us good feedback. They were given the opportunity to do testing and ask questions. We are now preparing for our 3 green campaign awareness by next month such that Mauritian people can be well informed and cultivate this culture in their daily life in order for having a green Mauritius.

A group of people standing around a table with a computer

Description automatically generated with medium confidence

A group of people in a room

Description automatically generated with medium confidence

A group of men wearing masks

Description automatically generated with medium confidence

**14. Testing of prototype**

**YouTube Link:** [**https://youtube.com/shorts/JbdpgBiXSBs?feature=share**](https://youtube.com/shorts/JbdpgBiXSBs?feature=share)

**15. Working Process**

A picture containing text, computer, working, computer

Description automatically generated

A picture containing text, indoor, floor, person

Description automatically generatedA picture containing text, indoor, person

Description automatically generated