initial state
Led off , Servo motor level

Lim1 unpush

Yes — Tray cw to Lim1

No

Tray ccw to initial position

IR1 and IR2 not found trash

Yes — Led off

No — Led on

input signal fron Rasp pi

Yes

No

Plastic -> to bin Plastic
Others -> to bin Others
Aluminium -> to bin Aluminium
Paper -> to bin Paper

Flow chart

IR1 IR2

4
6
26
47
51
2
GND

Relay

Com NC NO   Com NC NO
Lim1   Lim2

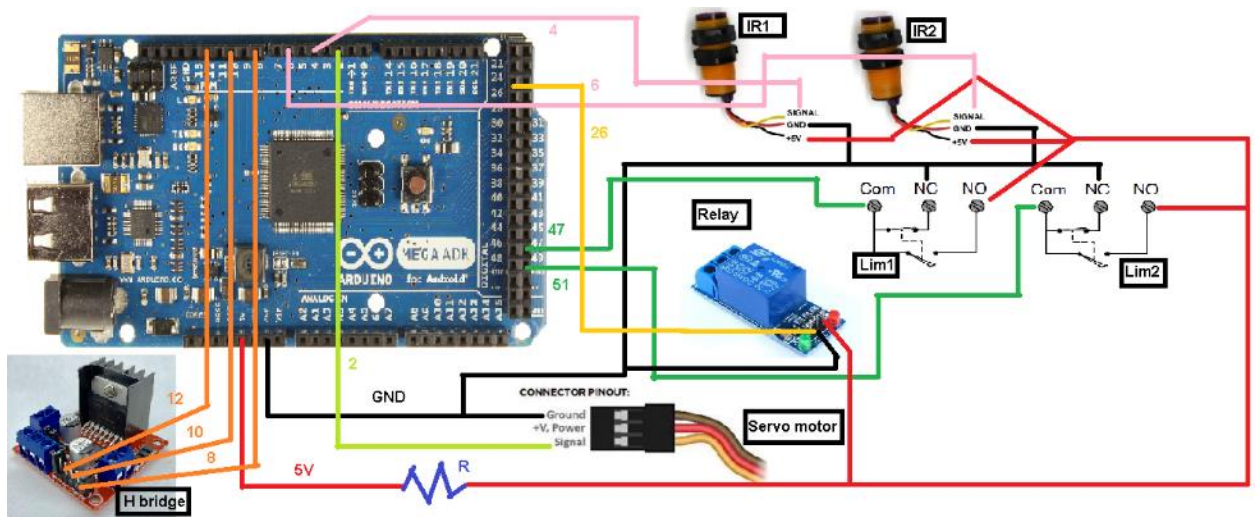SIGNAL GND +5V

12
10
8
5V

H bridge

CONNECTOR PINOUT:
Ground
+V, Power
Signal

Servo motor

R

Arduino wiring diagram

Raspberry pi 4 GPIO