Setup:

1. Download RaspberryPi Imager in your system and in SD Card, download Raspberry P OS 64 bit (full).
2. Log on to RaspberryPi and in command line, enter
    a. Sudo apt update
    b. Sudo apt upgrade
    c. Pip install ultralytics
3. For Camera, in command line type : *sudo raspi-config.* Then, go to interface options> Legacy camera > Enable

Hardware Related Errors:

If RaspberryPi does not boot and while booting, the yellow LED on raspberrypi either does not turn on or does not blink and turns on, the SD Card might be corrupted. Try changing the SD Card.

For camera, if it dos not turn on during experiments, re-insert the camera cable and reboot the Raspberry Pi

Fish Feeder Hardware

Fish Feeder has a DC Motor connected to RaspberryPi using L293D driver. FInd the circuit-diagram of connection.

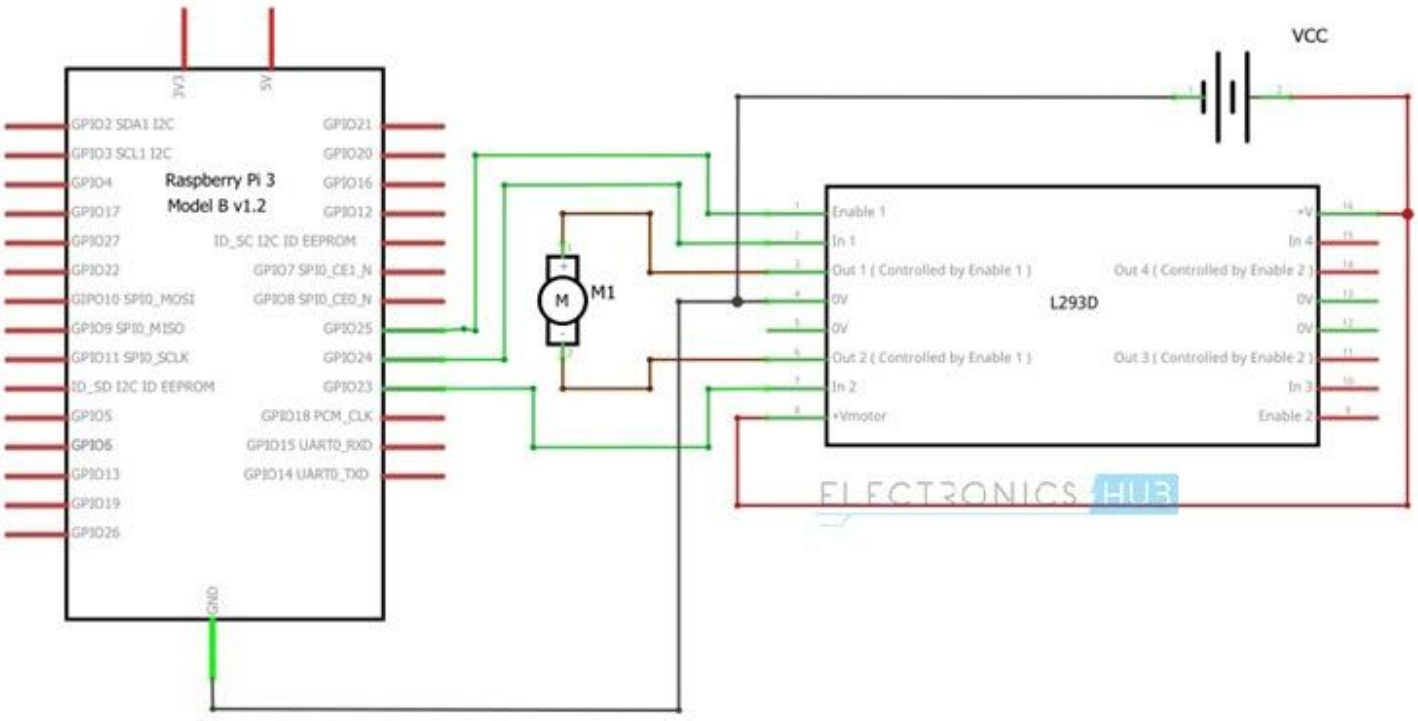

Figure1: Here see how 3 GPIO pins of RPi is connected to Input1 (In1), Input 2 (In 2), and Enable (Enable 1) is connected to Raspberry Pi. Out1 and Out2 are output pins connected to Motor (Fish feeder), +V, +Vmotor is voltage pin connected to battery together and one of Ground pin (0V) connected to RaspberryPi ground pin and battery negative terminal. In the setup, RaspberryPi GPIO pin 24 and 23 connected to In1 and In2 respectively, 25 is connected to Enable pin of L293D. (Left Feeder). And for right feeder, GPIO pin 20 and 21 connected to In1, In2 and GPIO 16 connected to the Enable pin.

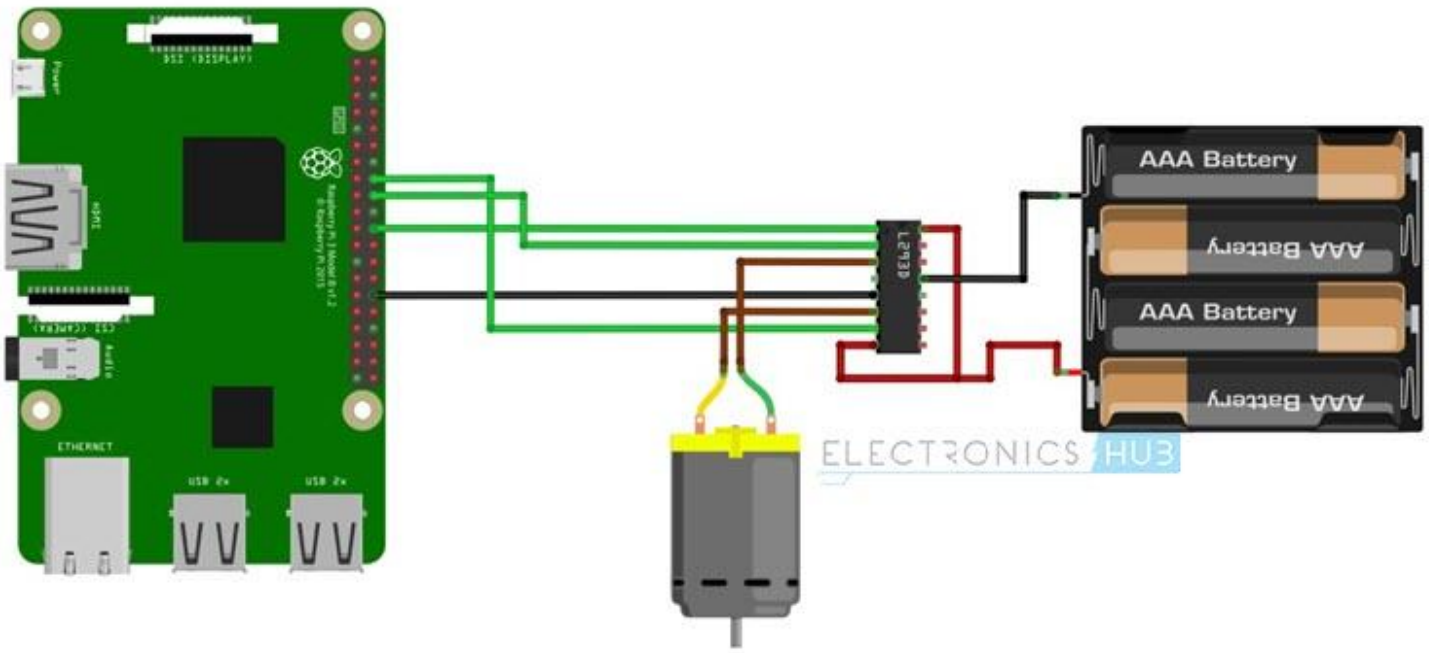

Figure 2: Diagram of left feeder setup

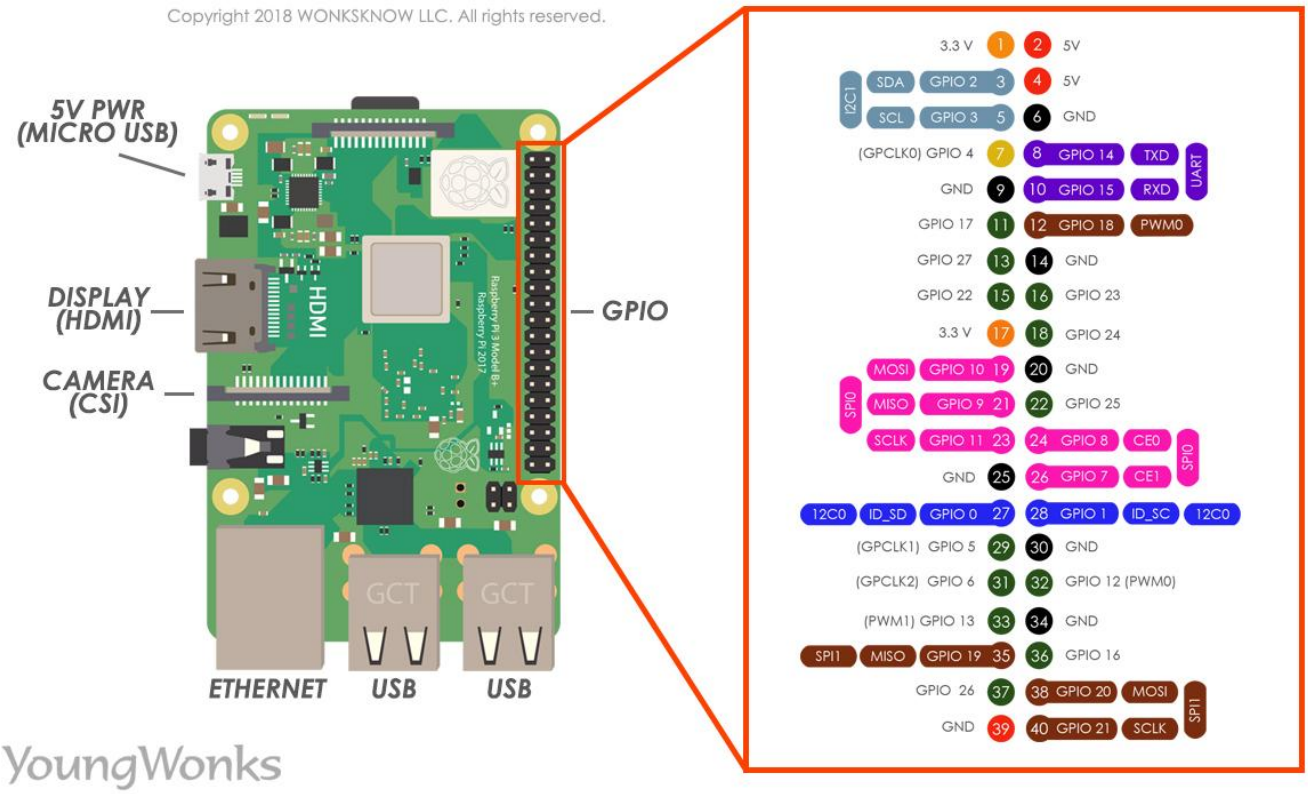

Figure 3: RaspberryPi pin diagram