



SOLAR POWERED WATER TRASH COLLECTOR

MICROPROCESSOR AND MICROCONTROLLER-TEAM 4

- Urban water bodies in India are suffering because of pollution and they are used for disposing untreated local sewages and solid waste.
- More manpower and time consumption for cleaning water trash in lakes, rivers



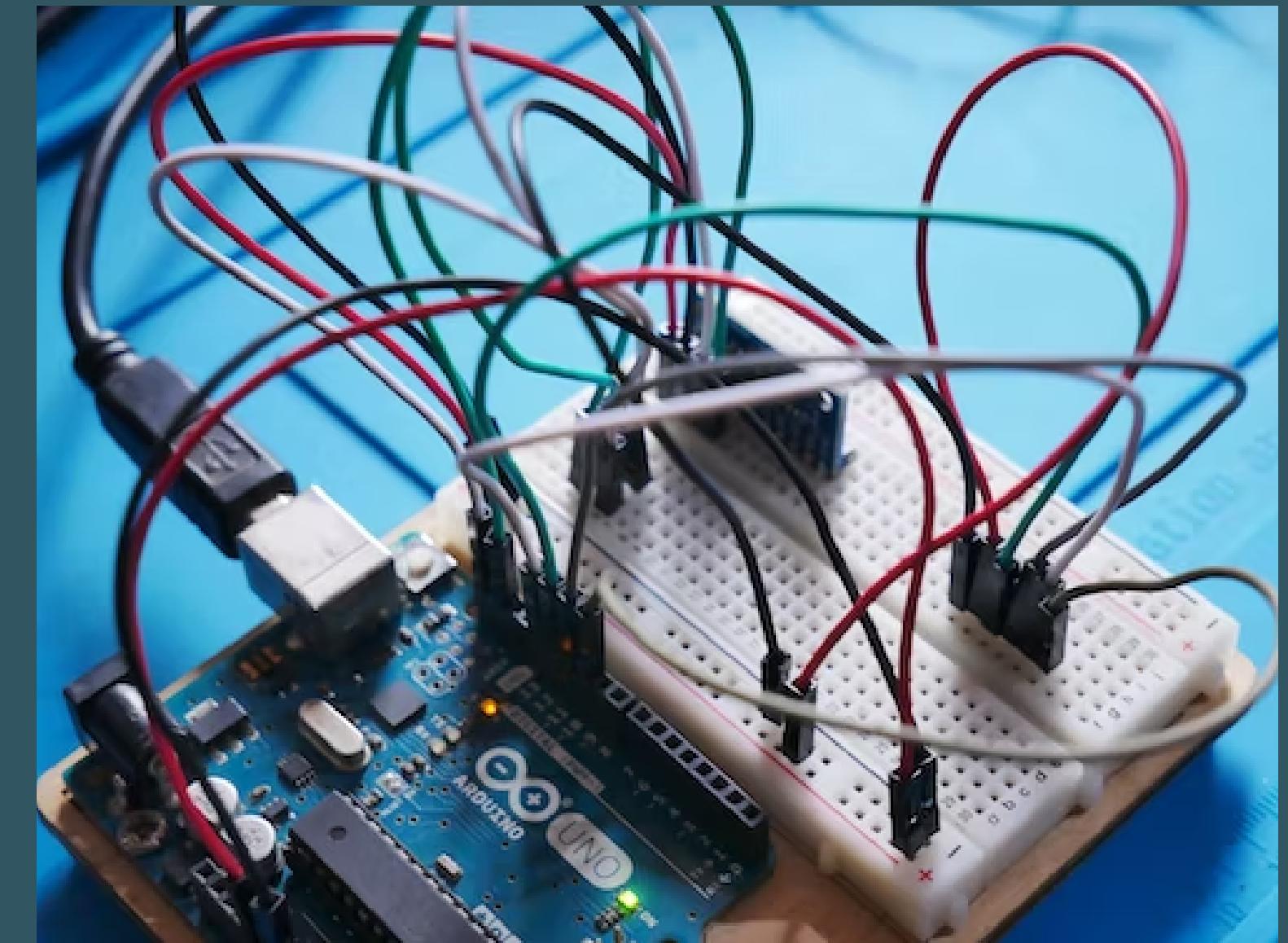
PROBLEM STATEMENT?

This project intends to gather various wastes from water bodies while minimising human influence. The equipment's gathered garbage is easily disposed of. The solar-powered water garbage collector is user-safe and environmentally sustainable.

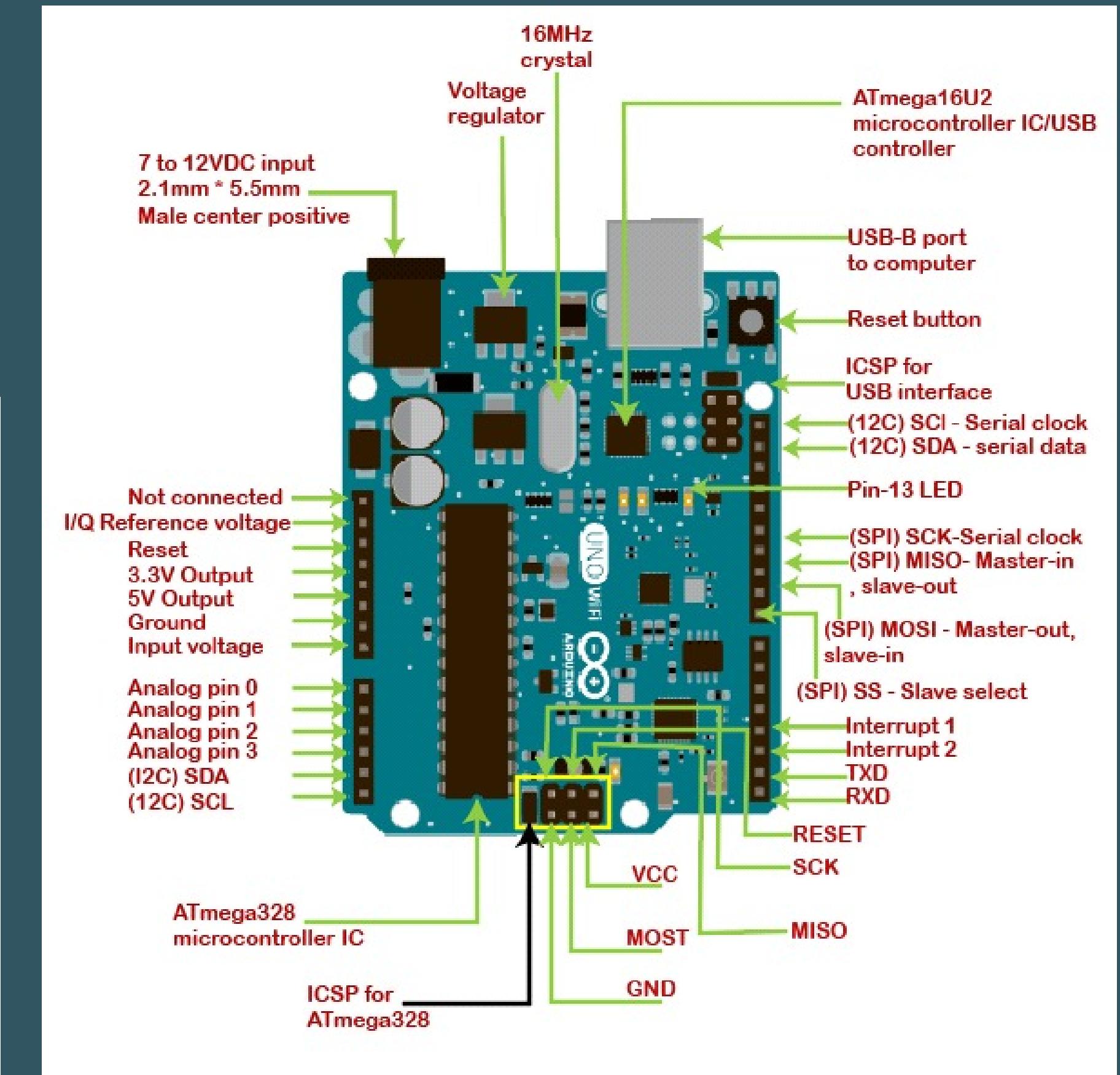
OBJECTIVE

COMPONENTS

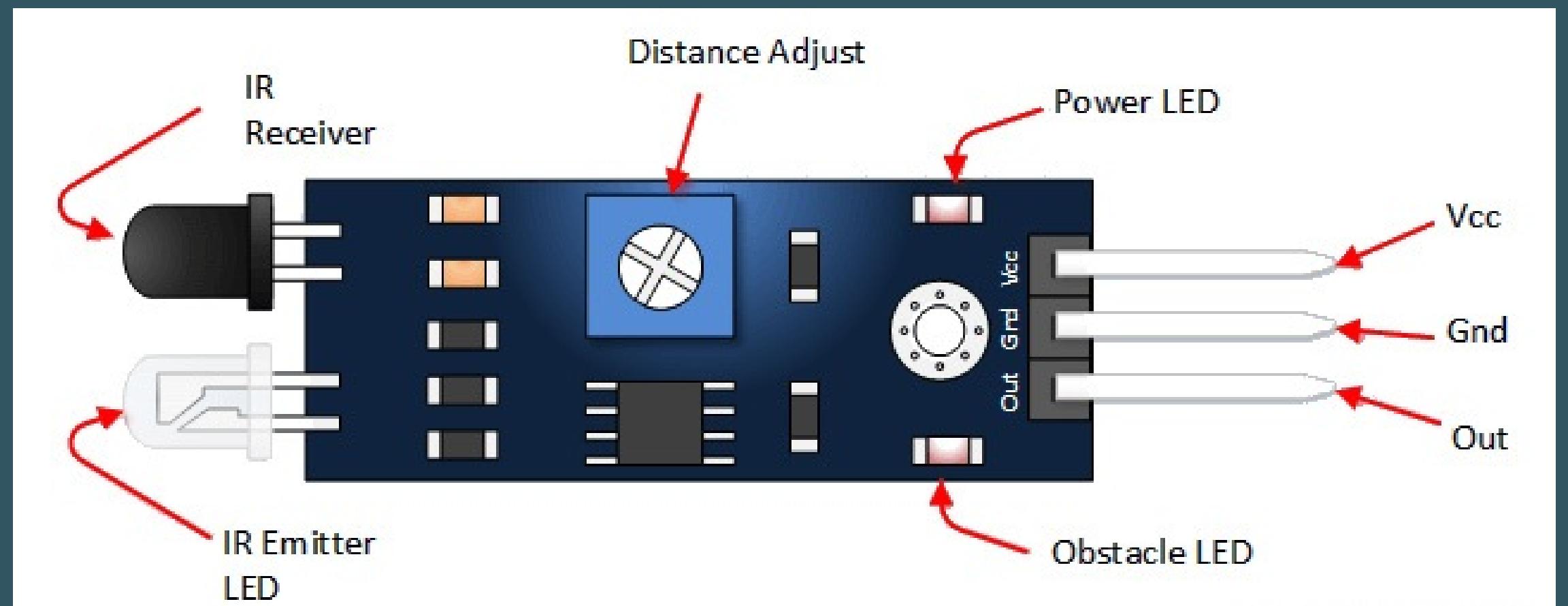
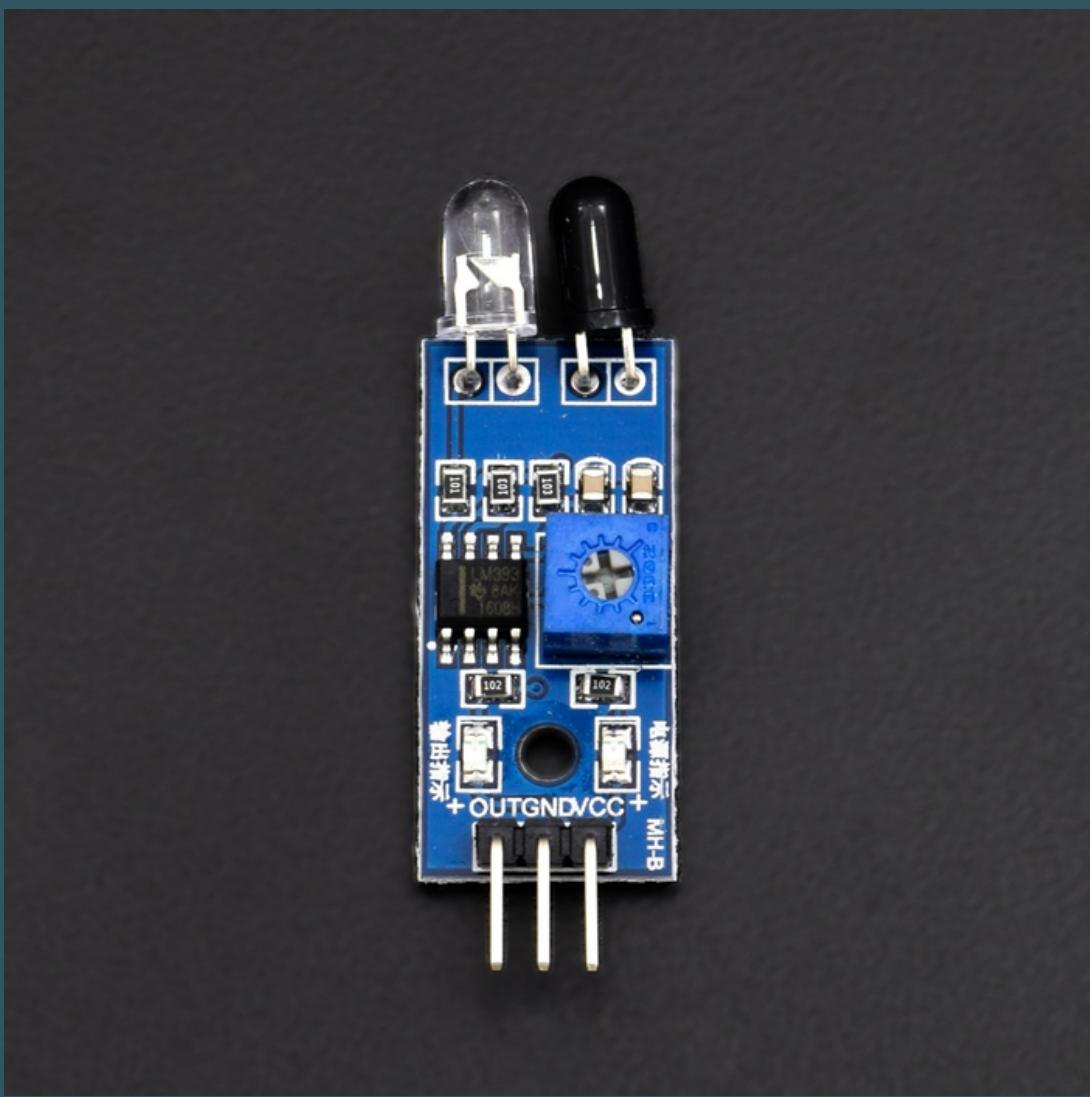
- ARDUINO UNO
- BATTERY
- ULTRA SONIC SENSOR
- PIR SENSOR
- SERVOMOTOR
- PUSH BUTTON
- BREADBOARD
- WIRE



ARDUINO UNO

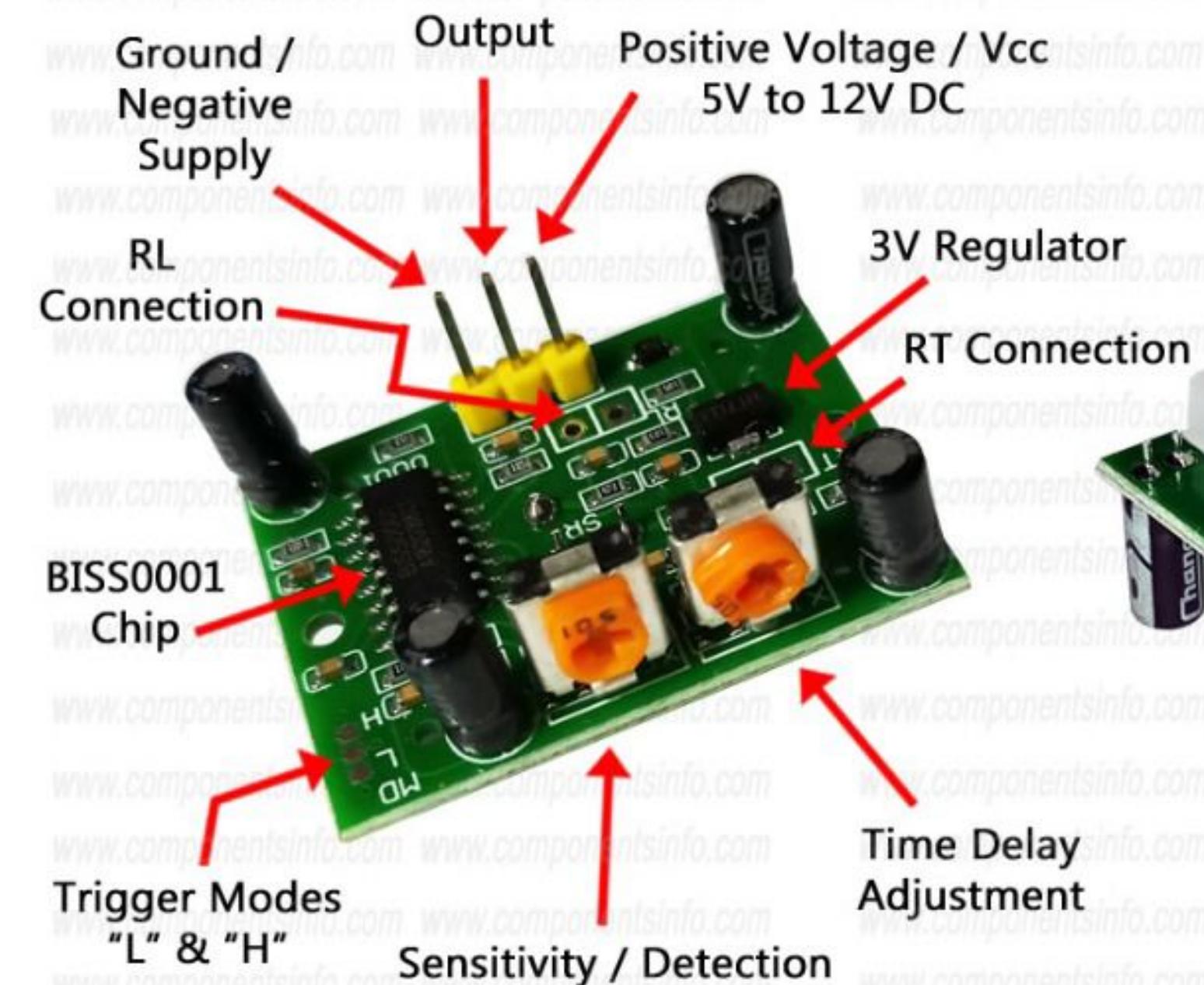


IR SENSOR



PIR SENSOR

Back Side of Module

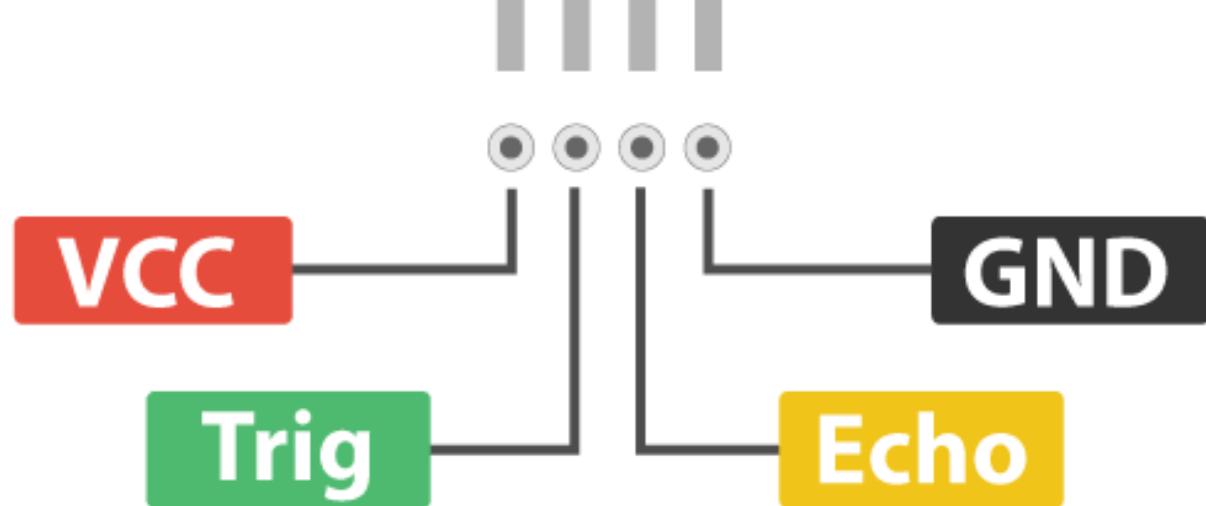
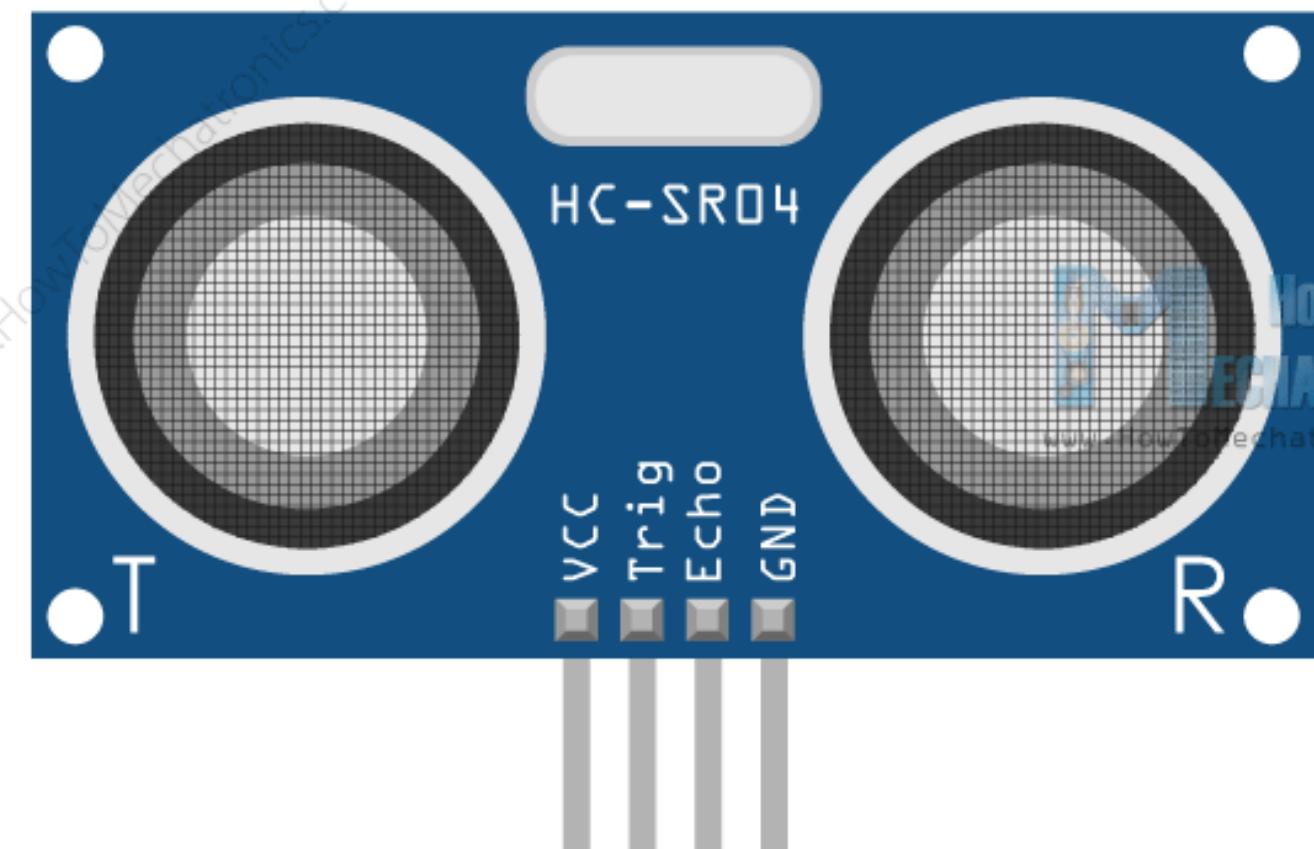


Front Side of Module



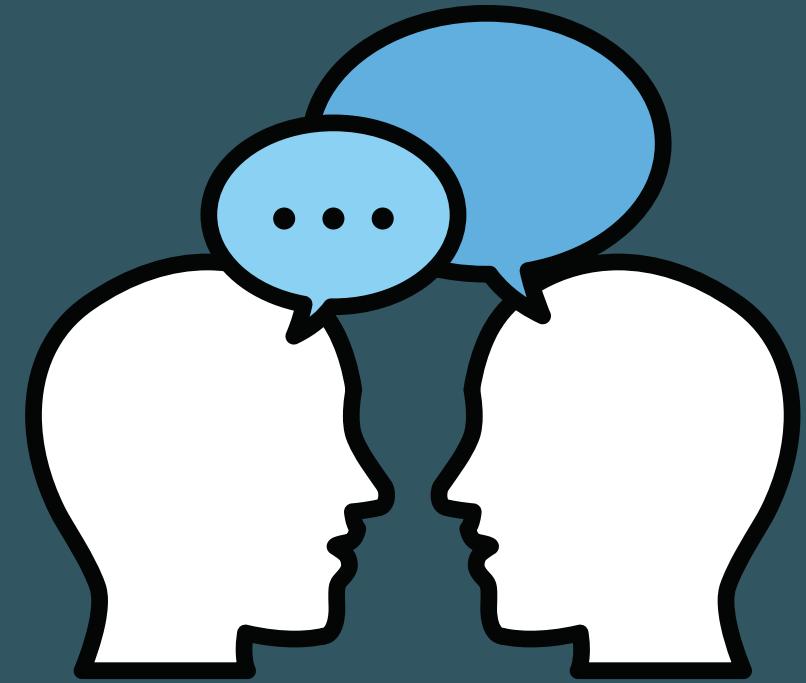
ULTRASONIC SENSOR

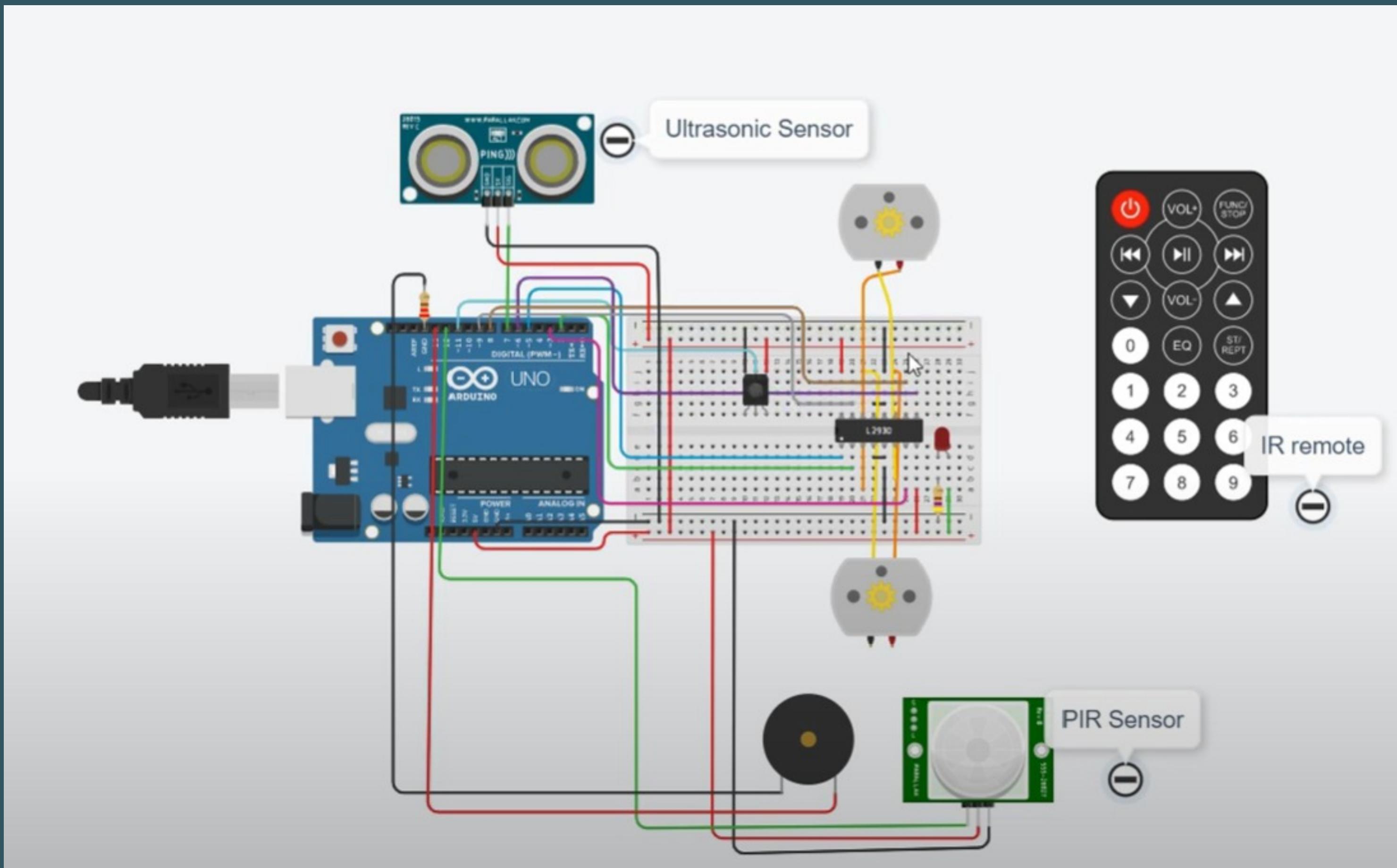
HC-SR04 Pinout



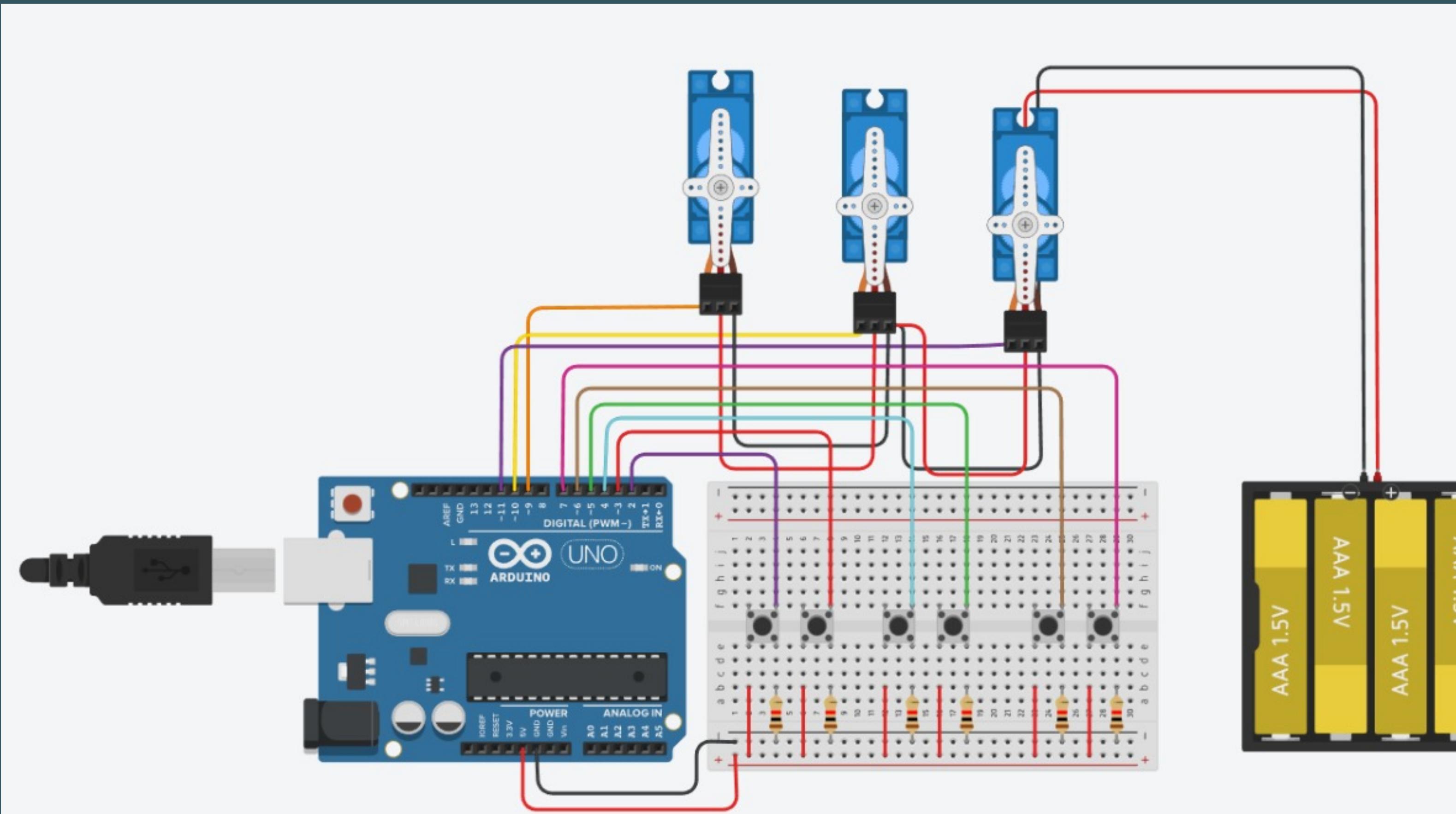


CIRCUIT IMAGE

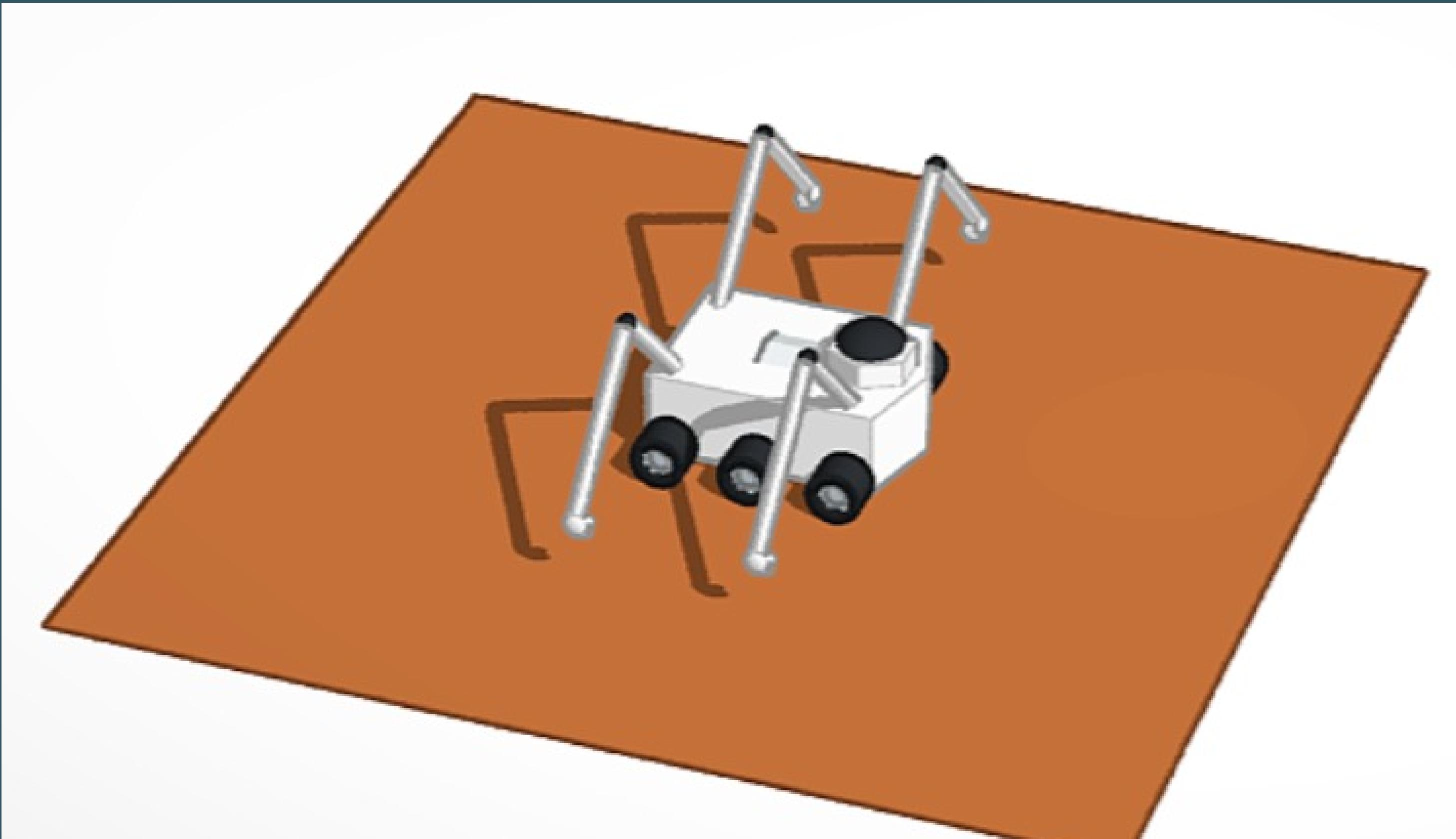




ARDUINO RC ROBOT TINKER SIMULATION



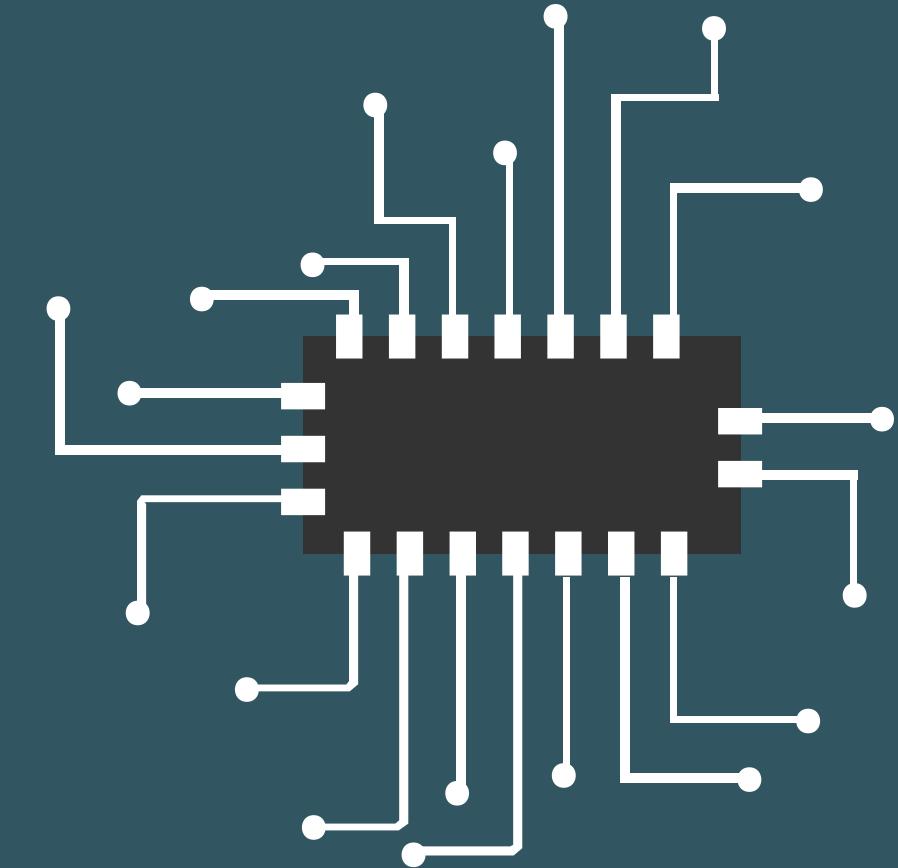
ROBOT ARM TINKERCAD SIMULATION

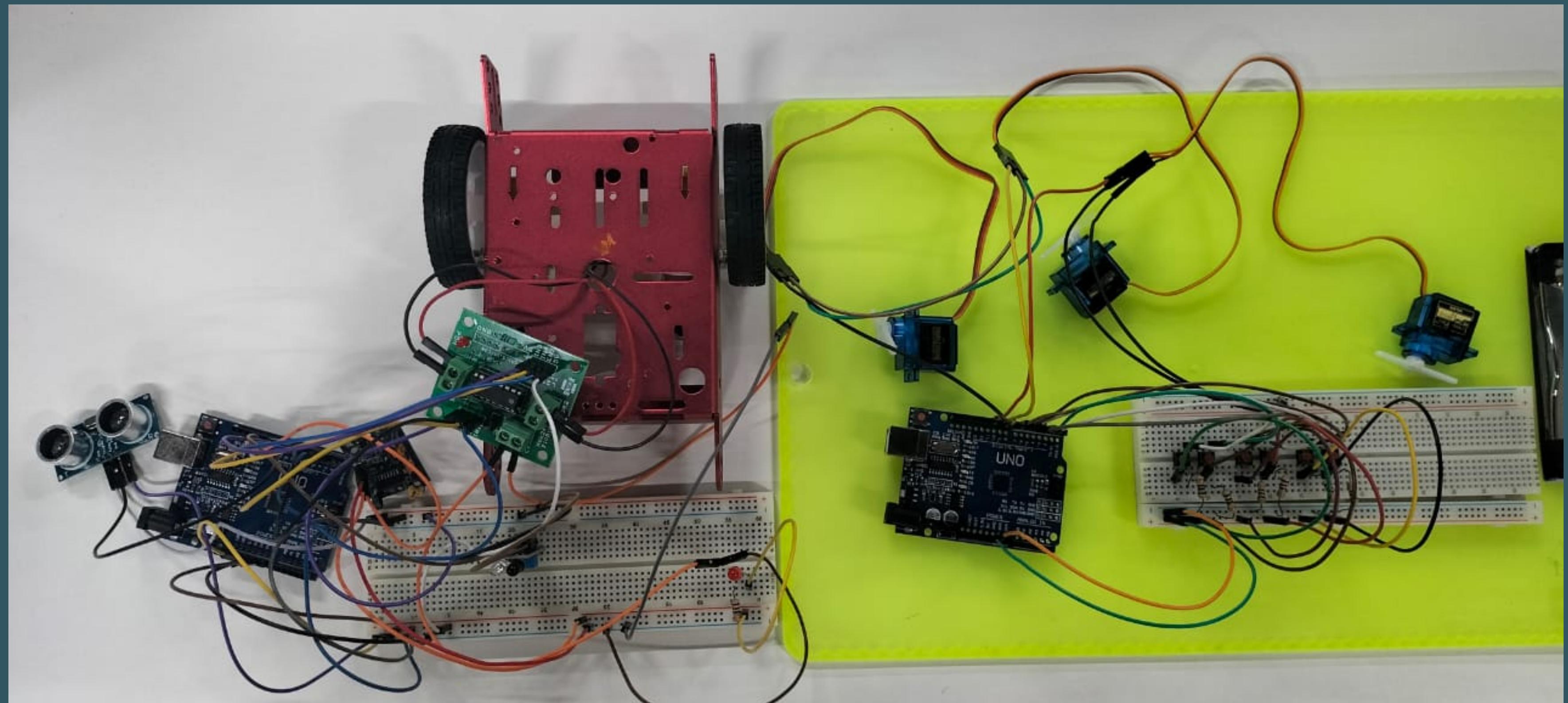


PROTOTYPE OF MODULE



HARDWARE IMPLEMENTATION





LITERATURE SURVEY

S.NO	TOPIC NAME	AUTHOR	YEAR OF PUBLISHED
1.	Solar Based River Water Garbage Collector	Raja Lekshmi R. S., Roniya R.,	2022
2.	Solar Powered Floating Trash Collector with Water Purifier	Raja Lekshmi R. S Roniya R	2021
3.	Solar Operated Water Trash Collector	Amruta Khot Shreya Kamble	2020

This module is made with the intention of providing a light, portable, automated device with smart controls that will gather all floating trash by recycling water and without any physical assistance from humans. It will also have a low energy consumption and be entirely powered by solar energy.



- By altering this device, it is utilised to automatically clean up trash from beaches.
- By installing a wifi module, it can be operated straight from a phone



Phase 1
Proposing concept



Phase 2
Collection of material



Phase 3
Preparation of required algorithms



Phase 4
Setting up Prototype design



Phase 5
Final prototype submission



Thank you