Assembly

Introduction

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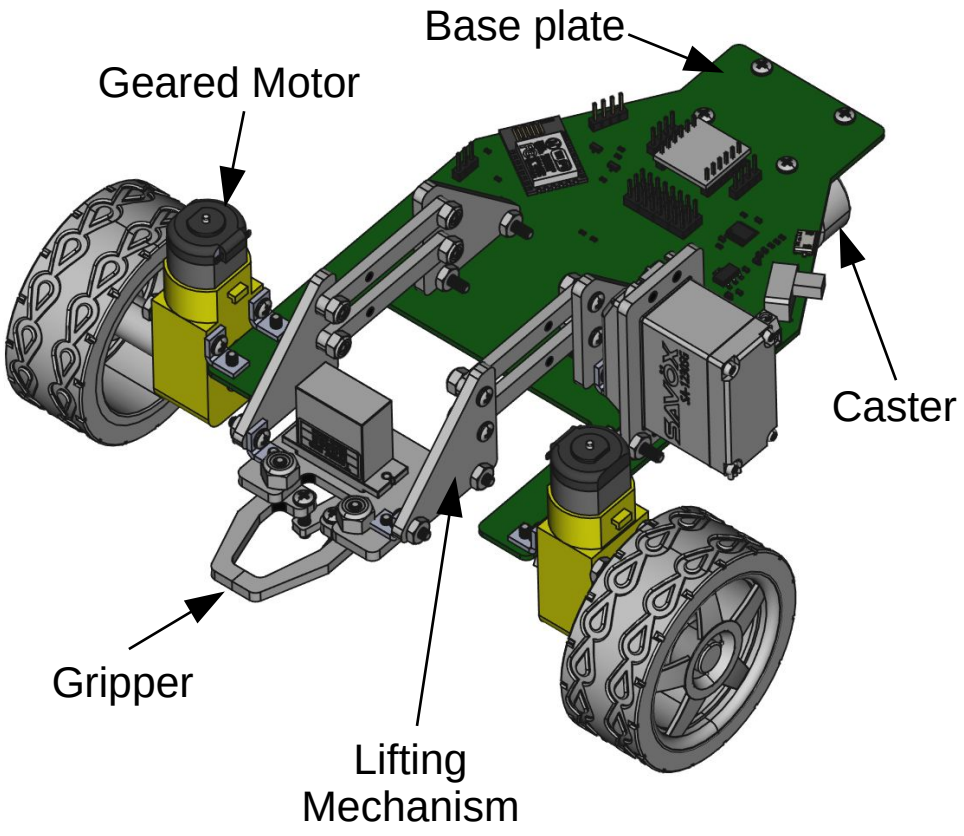
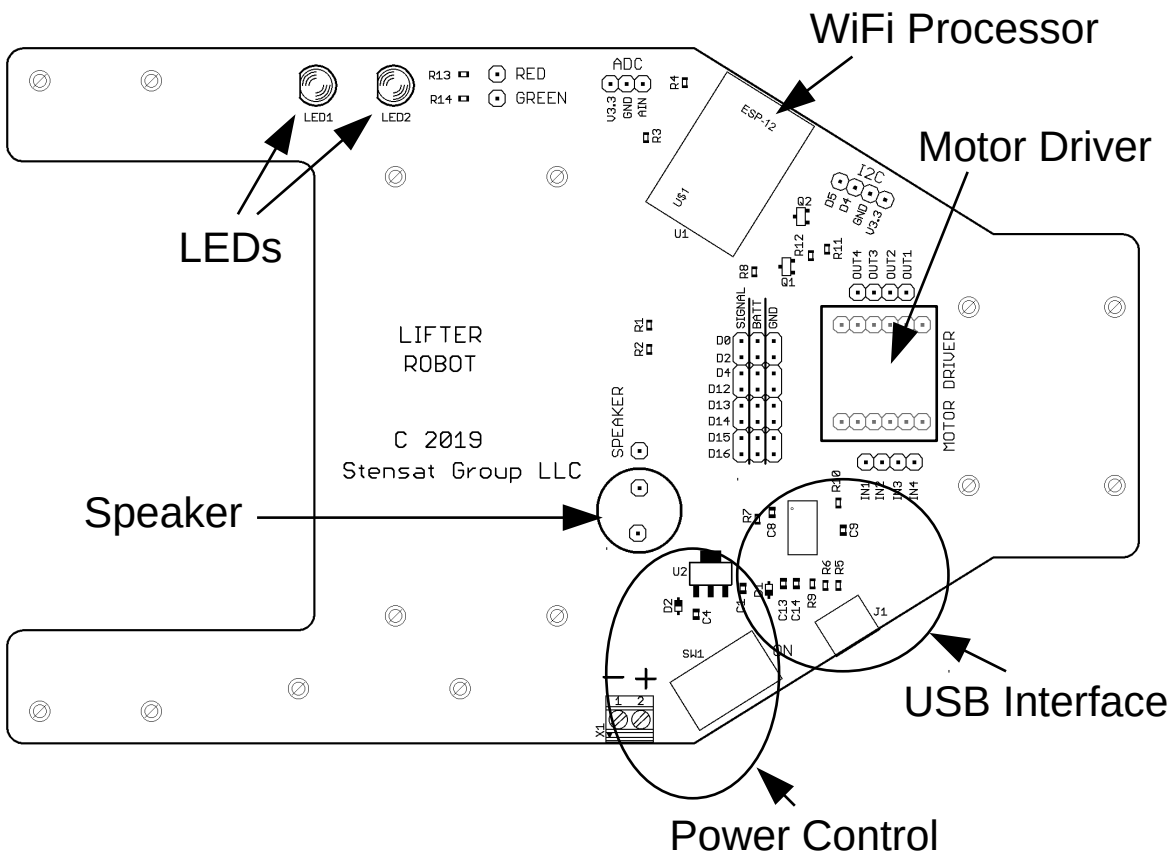
- The Lift Robot is shown to the right.
- For locomotion, it has two driving wheels and a caster.
- It’s actuator is a lifting mechanism with a gripper.
- The green base plate where all parts attach is also the circuit board with the processor and all electronics.



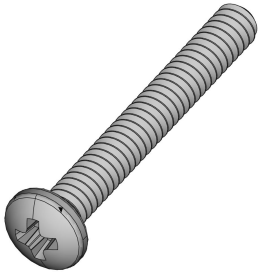
Introduction

- The processor board is also the structure of the robot. It has a WiFi based processor module, motor driver module, a USB interface and power control
- Other features include two LEDs and a speaker.

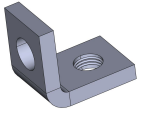


Components and Tools

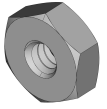
- The robot assembly will require two tools, a phillips screw driver and a ¼” nut driver.
- The parts needed are:
  - 4 1 inch screws
  - 4 nuts
  - 4 right angle brackets
  - two geared motors



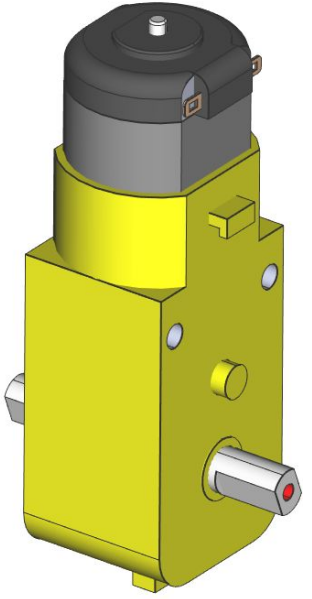
1 inch Screw



Right angle bracket



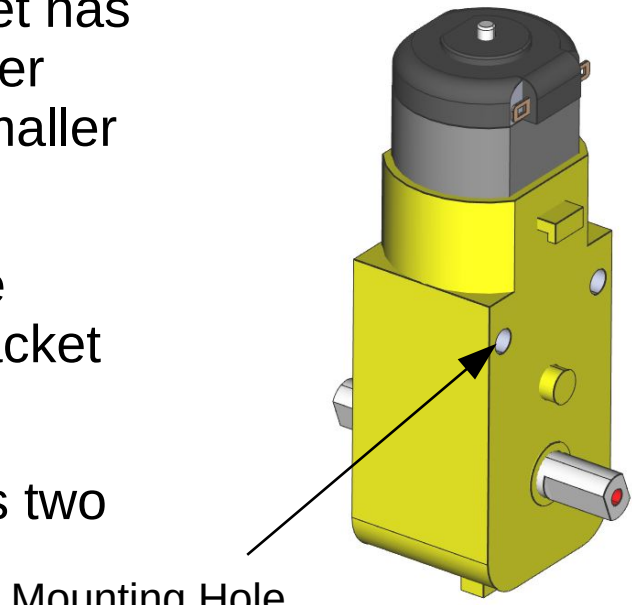
Nut



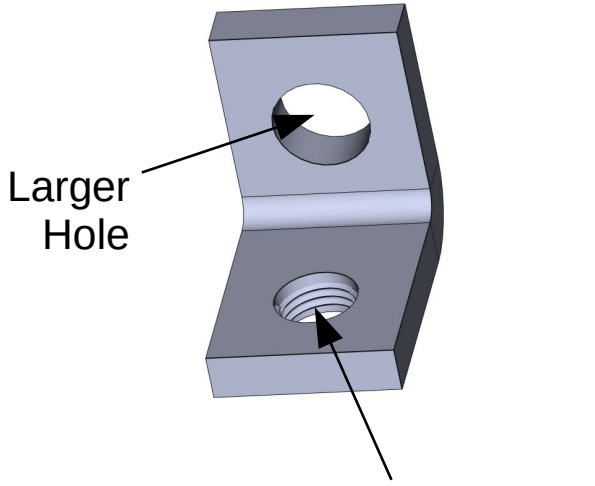
Geared Motor

Assembly

- The right angle bracket has two holes. One is larger than the other. The smaller hole is threaded.
- The larger hole will be used to mount the bracket to the geared motor.
- The geared motor has two mounting holes.



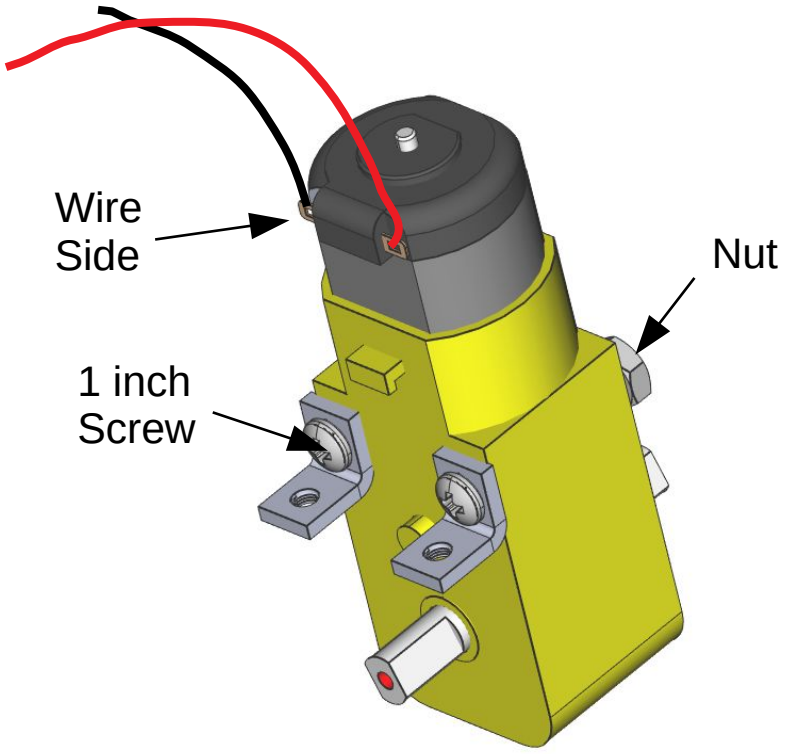
Geared Motor



Right Angle Bracket

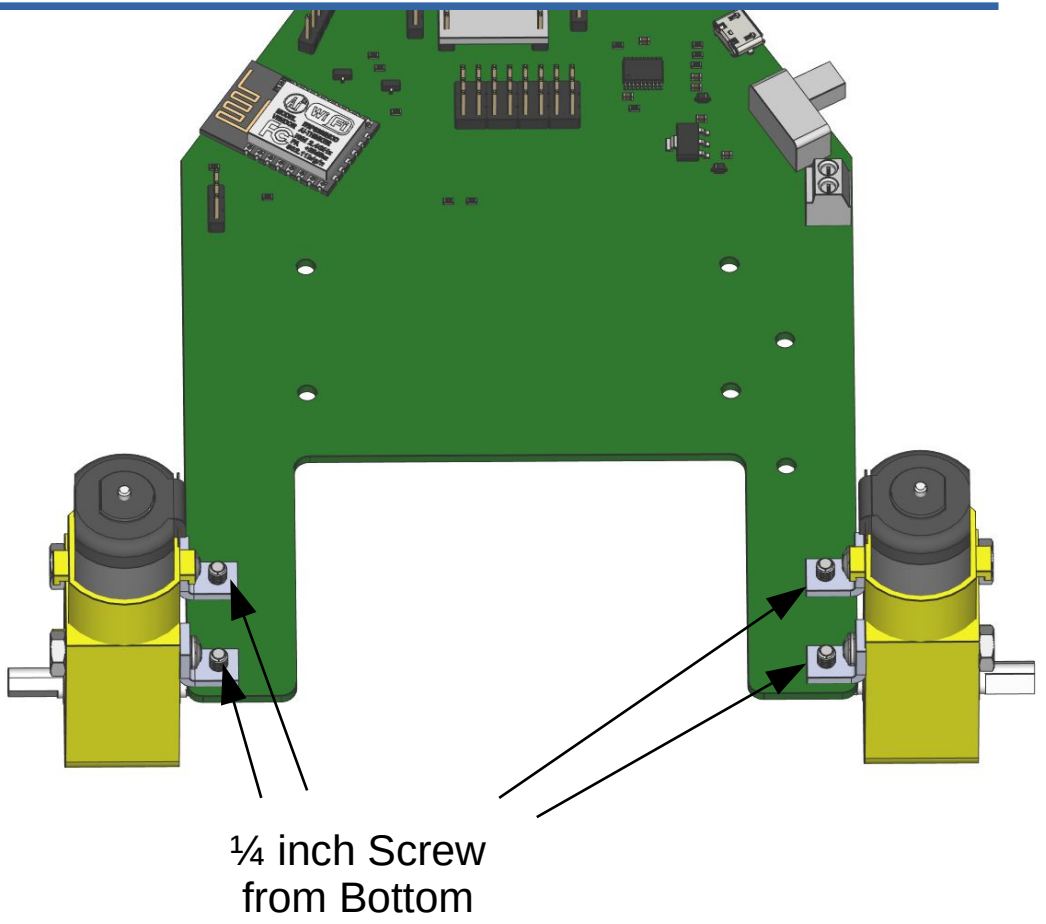
Assembly

- Secure the right angle brackets to the motors.
- Insert the 1 inch screws into the larger hole of the bracket and insert into the holes in the geared motor. Make sure to insert on the side where the wires are attached to the motor.
- Secure each screw and bracket with a nut.
- Do the same for the second motor.



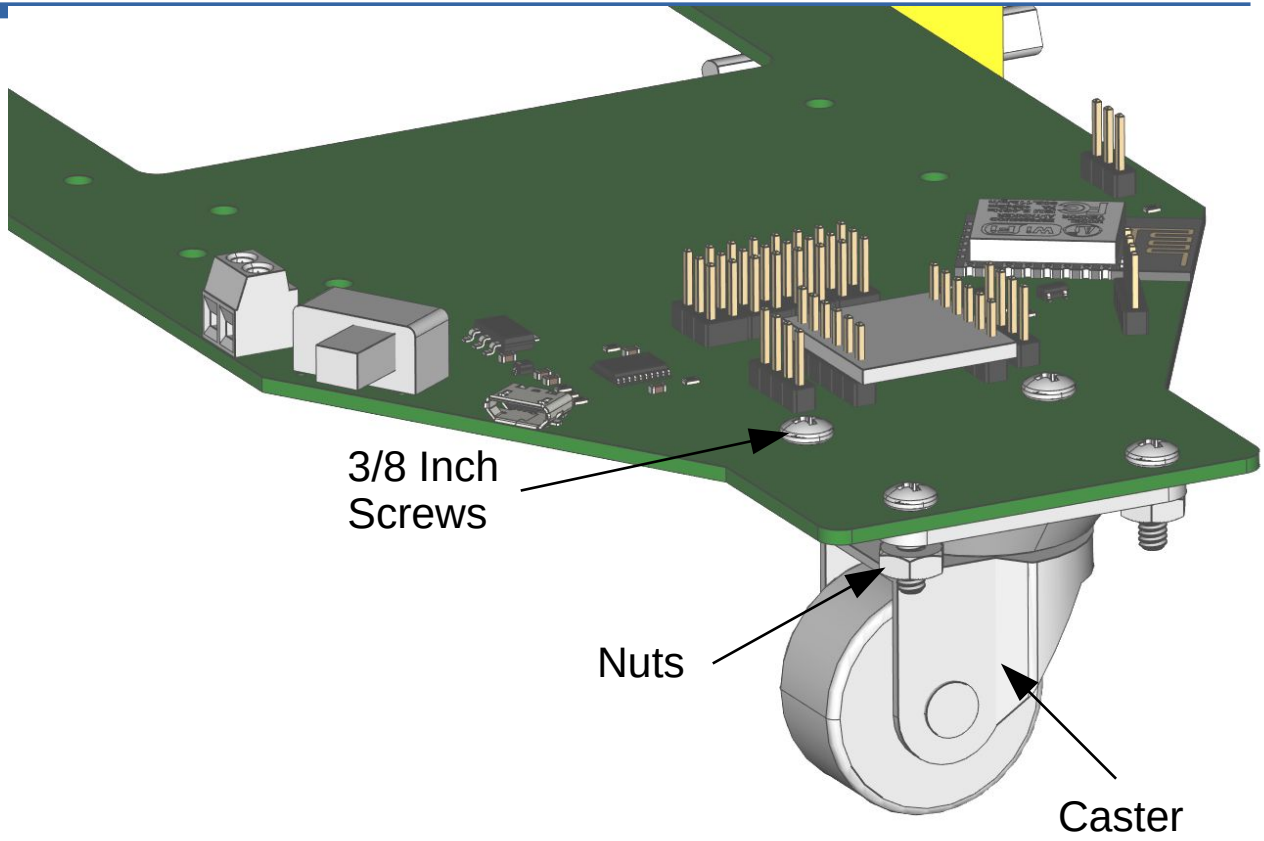
Assembly

- Take the main board of the robot and position one of the assembled motors as shown.
- Secure the motor assembly with ¼ screws from the bottom side.
- Do the same for the second motor.



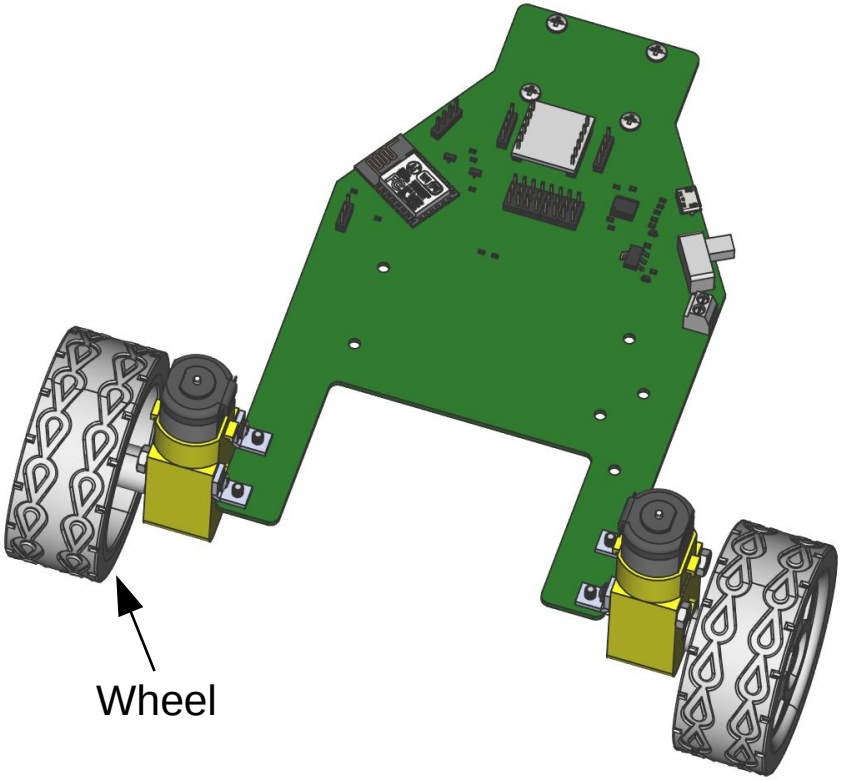
Assembly

- Position the caster on the bottom of the base plate so that the holes align.
- Get 4 3/8” screws and four nuts.
- Secure the castor as shown.
- Be careful to not damage any of the electronics.



Assembly

- Install the two wheels onto the geared motor shafts.
- The motor shafts have flats spots so the wheels need to be rotated to match the shape of the shafts.
- Push the wheels onto the shafts when aligned.
- This completes the first part of the assembly.



Assembly

- The battery holder has a strip of strong double sided tape.
- The battery holder is to be secured to the bottom of the base plate as shown.
- Remove the protective layer from the double sided tape.
- Position the battery holder as shown and press against the bottom of the base plate. Make sure none of the holes in the base plate are blocked.

Insert photo of battery holder mounted