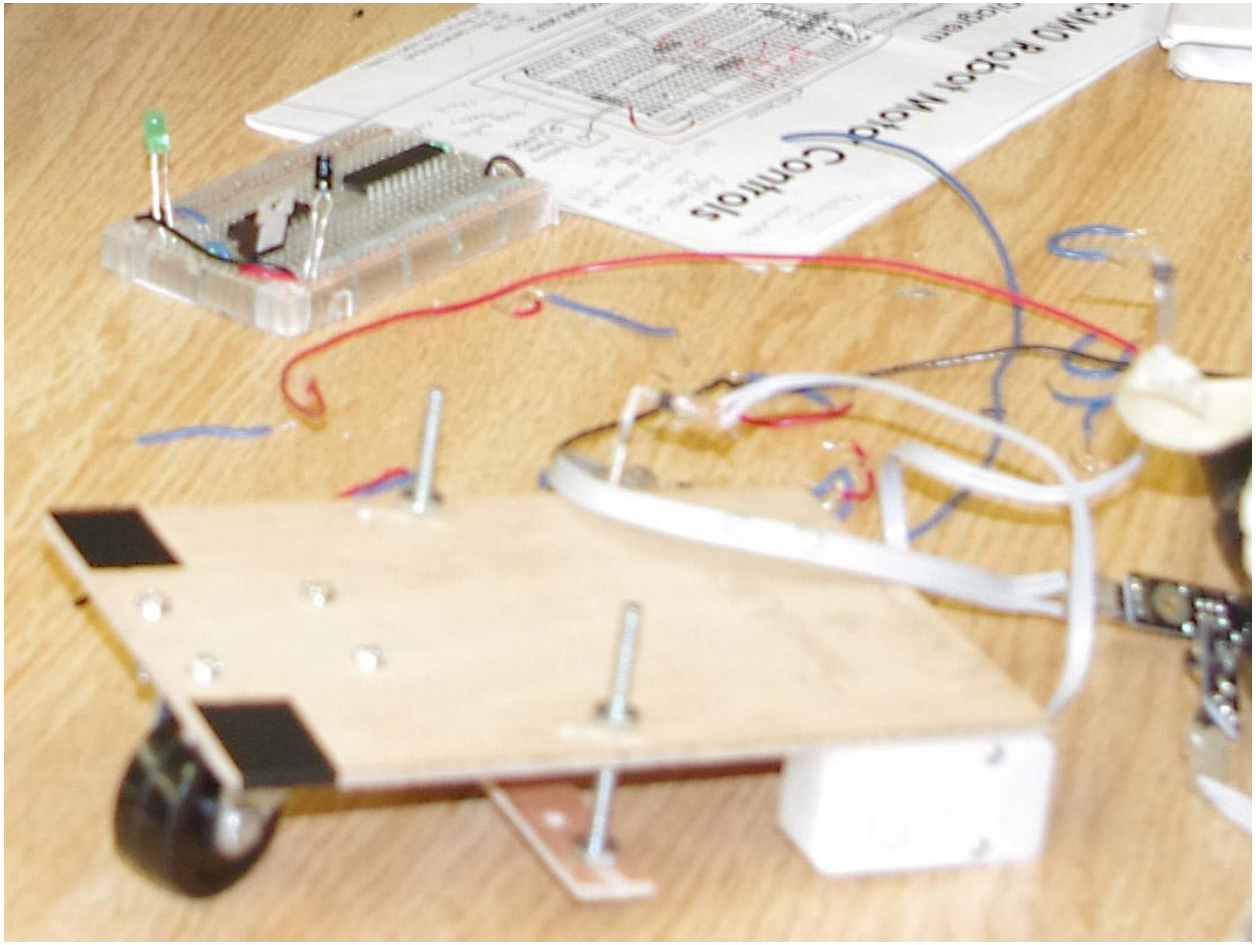
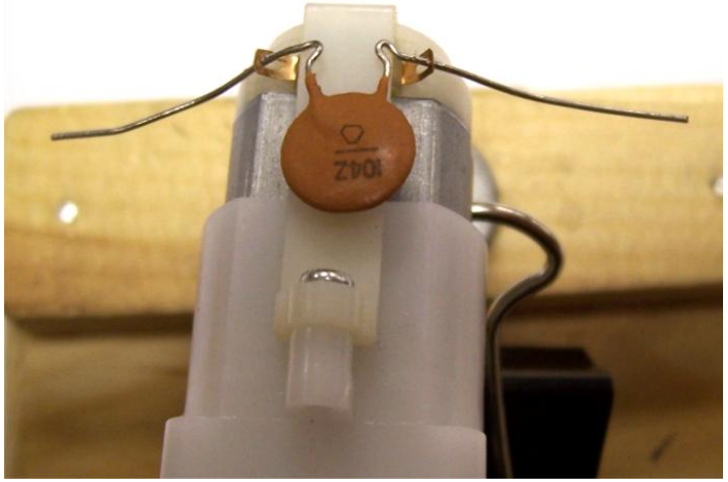
Line-following Bot Assembly



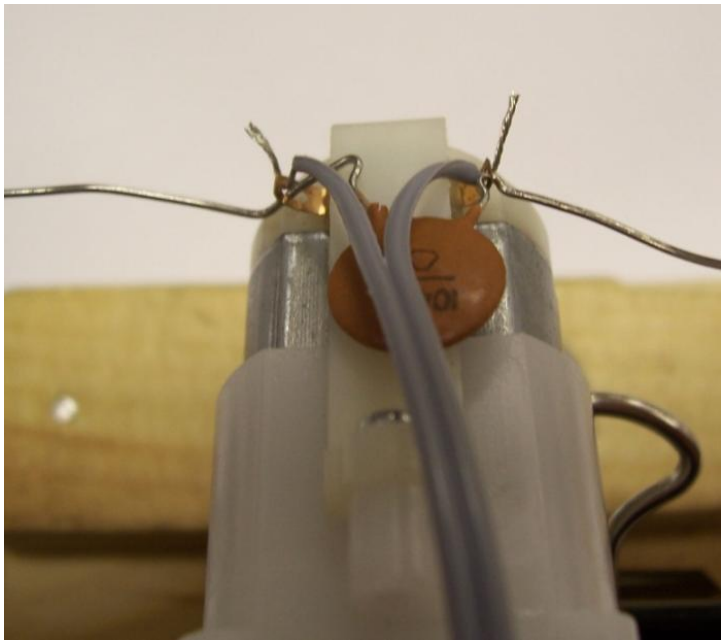
This presentation was developed by members of the Peel/Dufferin-Peel Computer Engineering Teachers Association.

Attaching the Cap and Leads

- Insert a 0.1uF ceramic disk capacitor into the motor terminals.

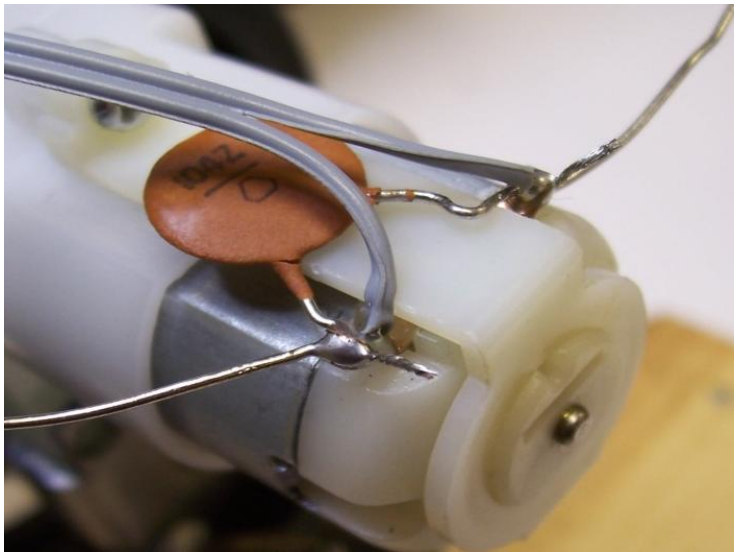


- Then insert the stranded wire.

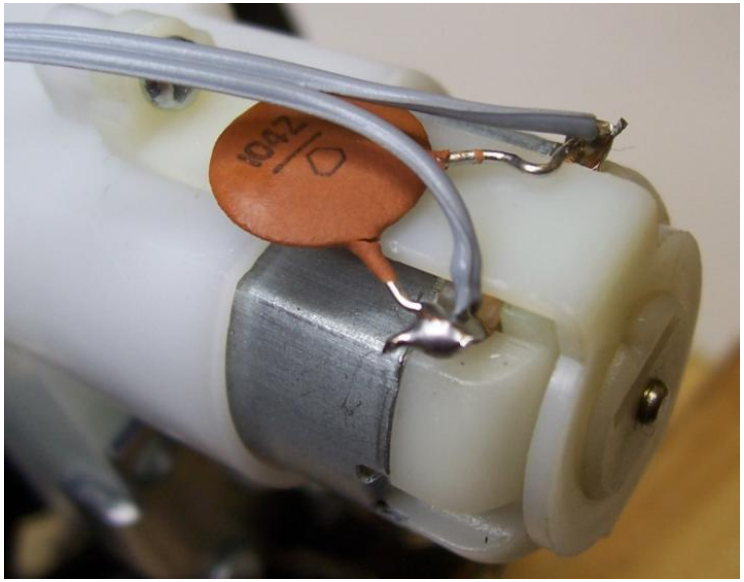


Solder and Trim

- Solder the terminal, capacitor and lead.

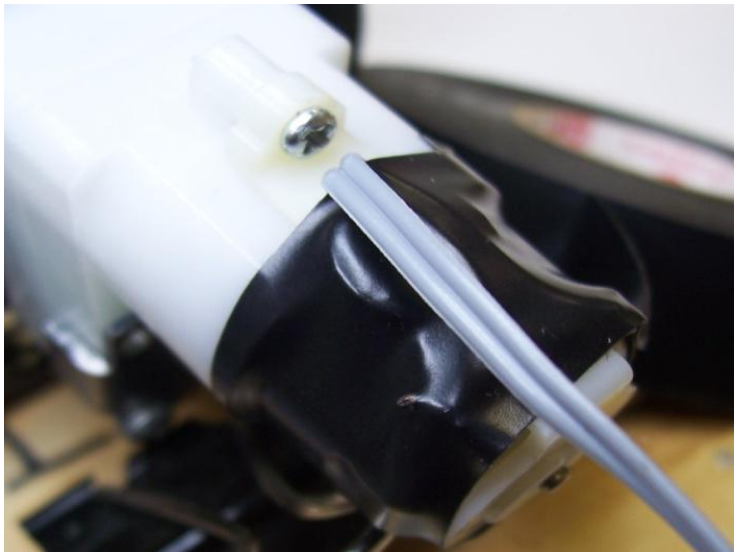


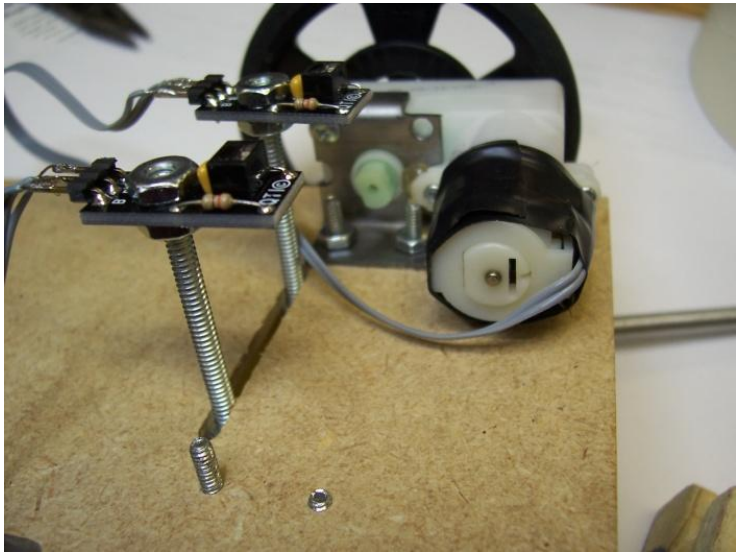
- Tim the excess wire.



Taping the Motor

- Wrap electrical tape around the motor, capacitor and wire.
- Fold back the wire and apply a few more turns of electrical tape. This ensures that if the wire is pulled it doesn't pull on the terminal.



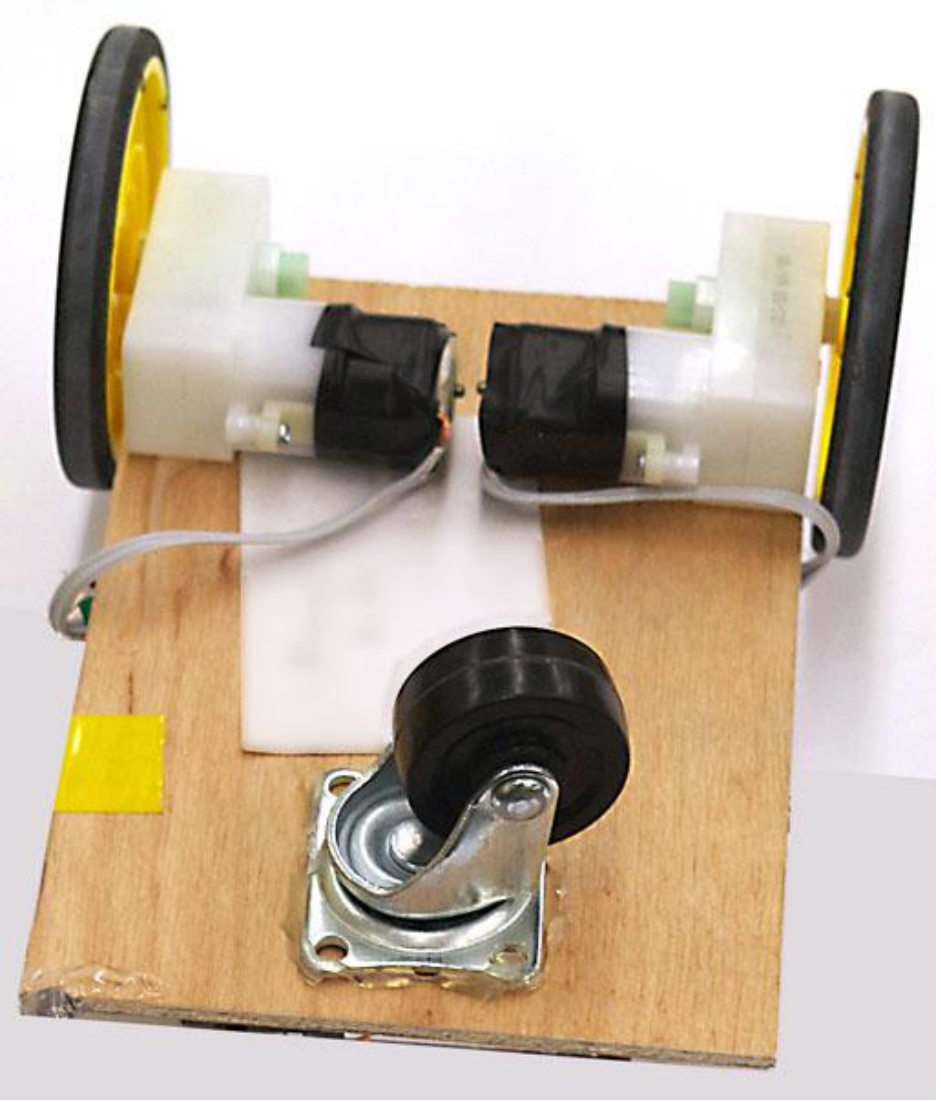


Finishing Touches

- Solder the other end of the motor leads to header pins. Hot-glue them to make them stronger.-

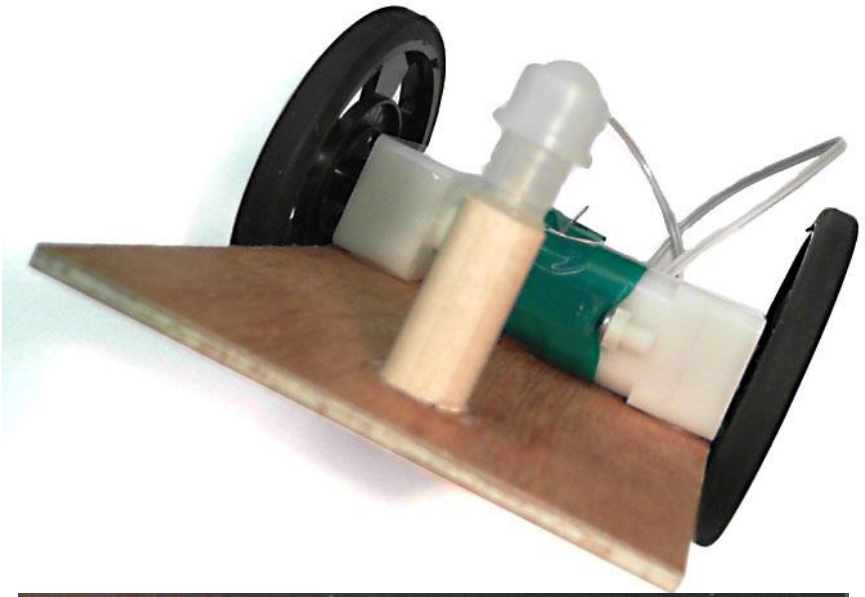
Mount the Motors

- Mount the motors to the base using hot glue. Be sure that the motors are properly aligned: they must be on the same axis, and parallel to each other.

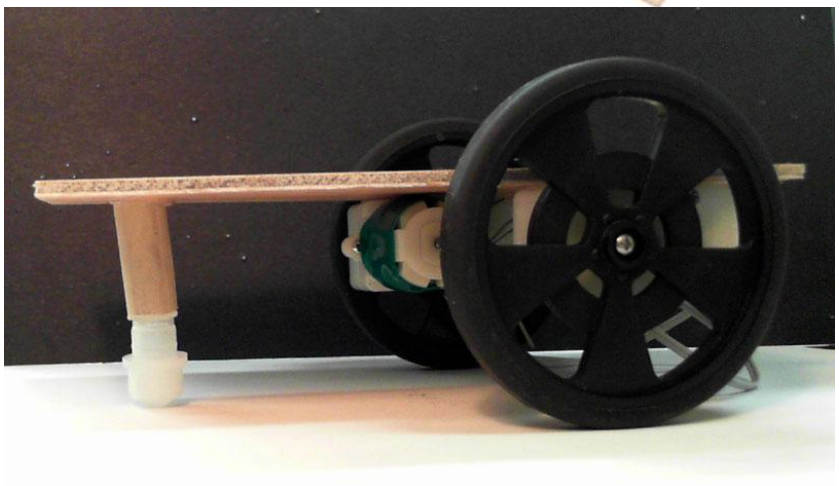


Adding the Caster

- Use hot glue to secure the caster to the base of the robot.

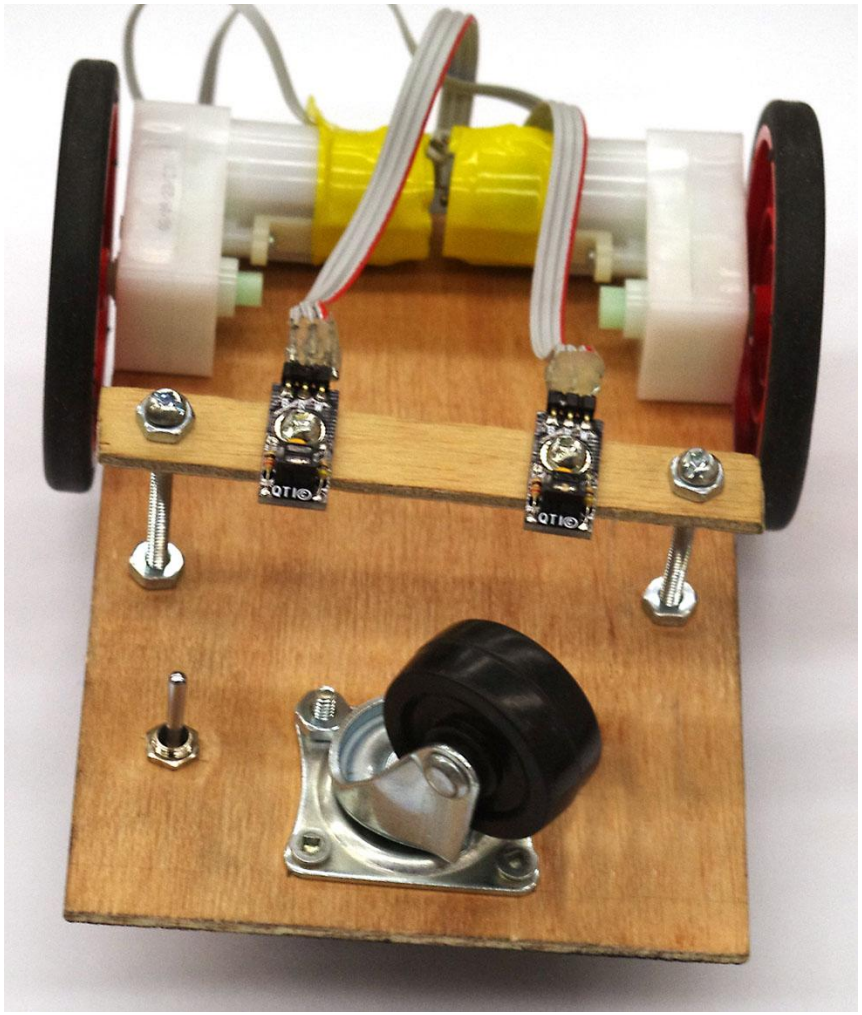


- Adjust the length of the dowel so that the base is level.



Installing the Sensors

- Use 1 ¾” x 8-32 screws to suspend the sensor mounting bracket below the base of the robot.
- Mount the sensors on the bracket using ½” x 6-32 screws. The sensors should be a minimum of 1” apart.
- Adjust the height of the sensors so they are about 3 mm above the table.



Ready to Plug and Play