Project ID: 2023-1-HU01-KA210-VET-000156243

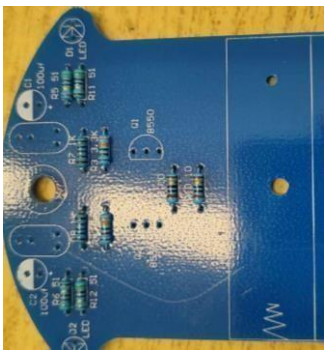
Line-follower Robot Assembly Guide

Project Details:

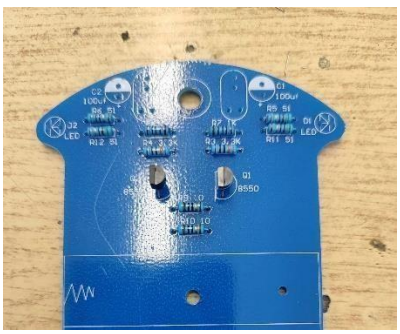
- **Project Title:** Discover the Green Life with Robots.
- **Project ID:** 2023-1-HU01-KA210-VET-000156243.
- **Funding Disclaimer:** Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Tempus Public Foundation. Neither the European Union nor the granting authority can be held responsible for them.

Assembly Steps

1. **Resistors:** Bend the legs of the resistors at 90° so that they fit into place. Then we solder them in and cut their legs down.



2. **Transistors:** You have to pay attention to the **polarity** and install them according to the drawing on the panel.



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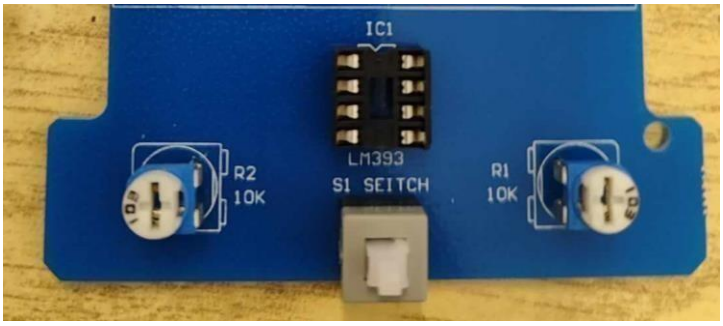
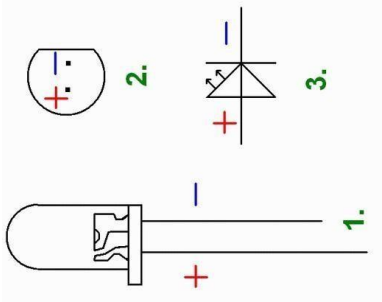
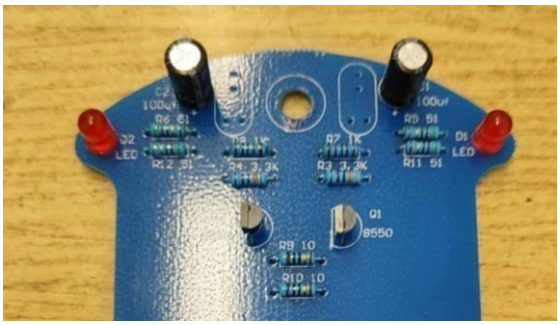
3. **Inserting the IC case, potentiometer, and the switch:** Make sure that the **notch on the IC case faces upwards**. On the switch, the orientation doesn't matter.



4. **Soldering in the LEDs and the capacitor:** The **polarity** of the LED and the capacitor must also be observed here.
    - There is a white stripe on the negative side of the capacitor, which is used to mark the negative leg. The white striped side of the capacitor is added to the white marking on the panel.
    - The shorter leg of the LED is the negative, the longer is the positive. This can also be measured with a multimeter.





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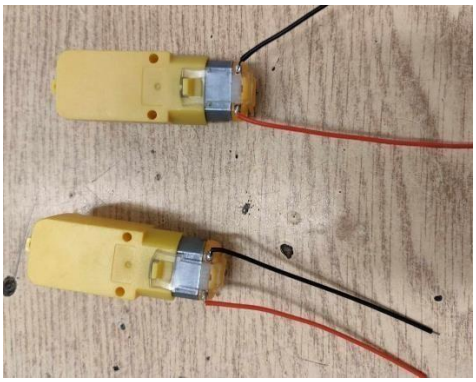
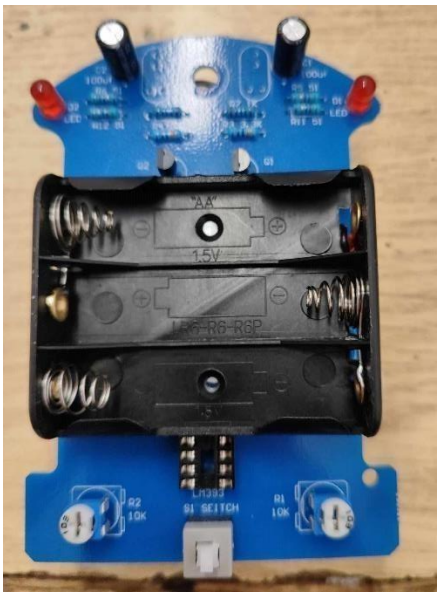
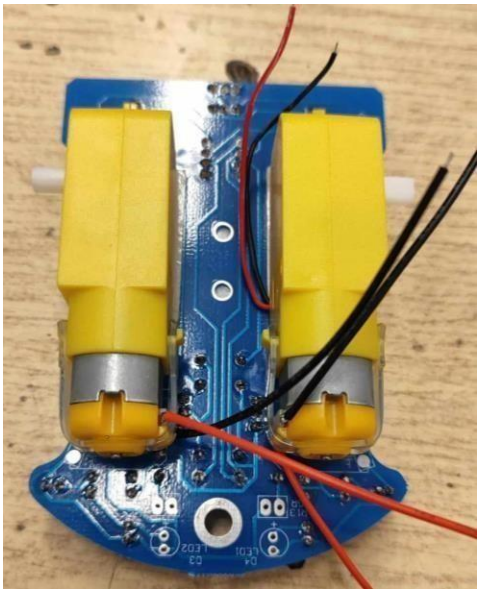
5. **Motors:** Solder the wires onto the motors.



6. **Gluing:** Glue the motors and the battery holder to the panel.





7. **Soldering Motor and Battery Holder Wires:** Solder the wires of the motor and the battery holder to the panel.
    - Pay close attention to the **polarity of the battery holder**!
    - Solder the wires of the motor in such a way that they can be replaced later if needed (this will turn out when the robot goes backwards).

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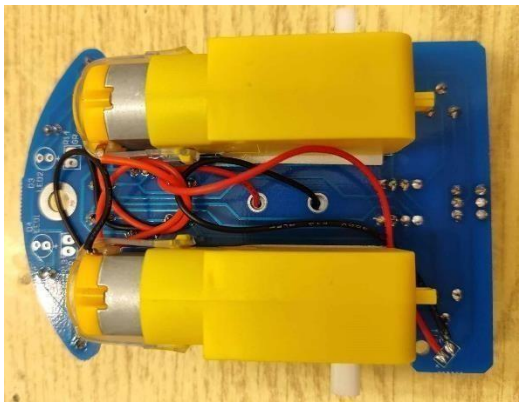
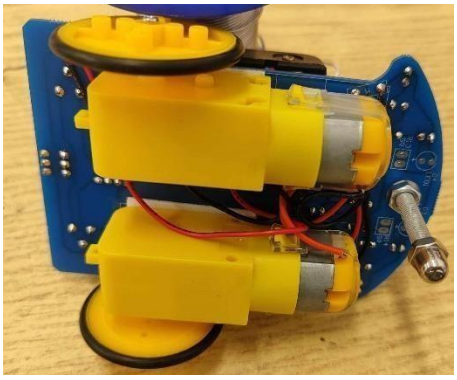


8. **Wheels:** Screw and the screw that goes through in place and the wheels onto the motors.



9. **Final Assembly and Adjustment:** Finally, solder the LEDs and light sensors on the lower half, then bend them a little. The robot can be adjusted to follow the line well by turning the potentiometers.