

"Step by Step"



Robotics

Smart Car Robot

Robotics – Smart Car Robot

Smart Car Robot “steps”

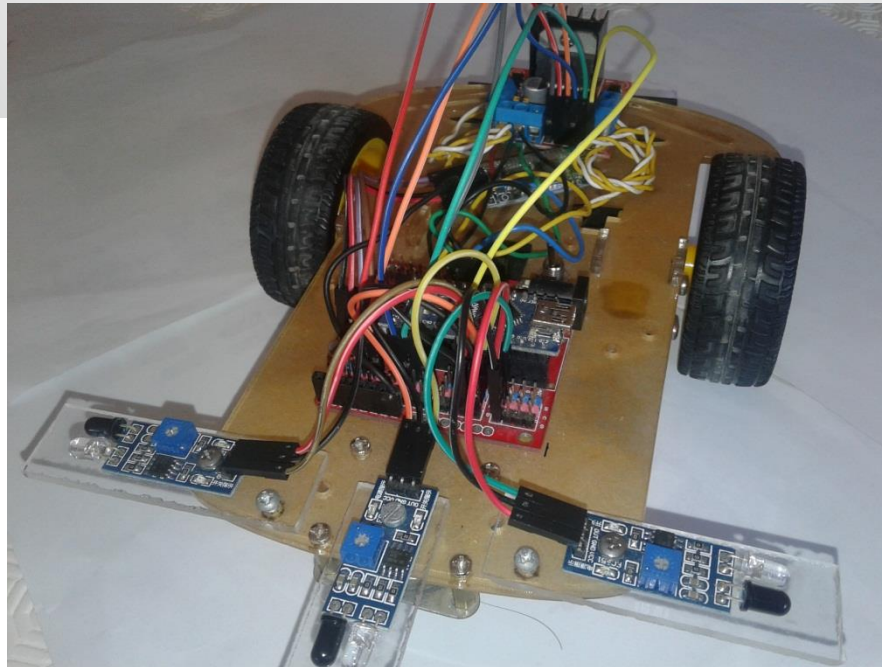
- Step 1: Assembling the robot support base;
- Step 2: Mounting the motor shield and top bracket;
- Step 3: Assembly of the components at the top of the robot;
- Step 4: Connections and sensors ;
- Stage 5 – Programming.



Robotics – Smart Car Robot

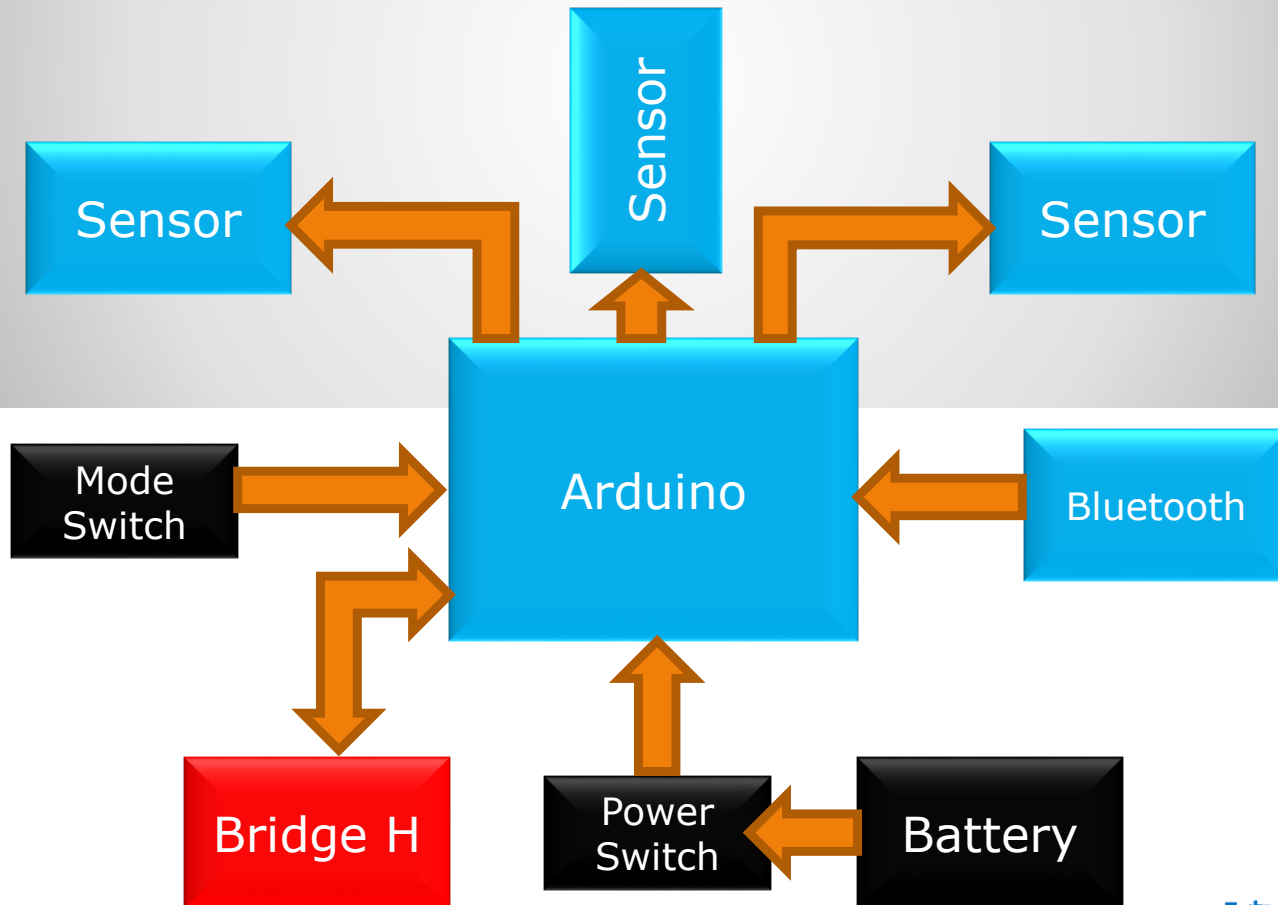
Smart Car Robot “definition”

The Smart Car Robot is a vehicle that independently must overcome obstacles and continuous along a route. Through a SmartPhone vehicle can be controlled via bluetooth.



Robotics - Smart Car Robot

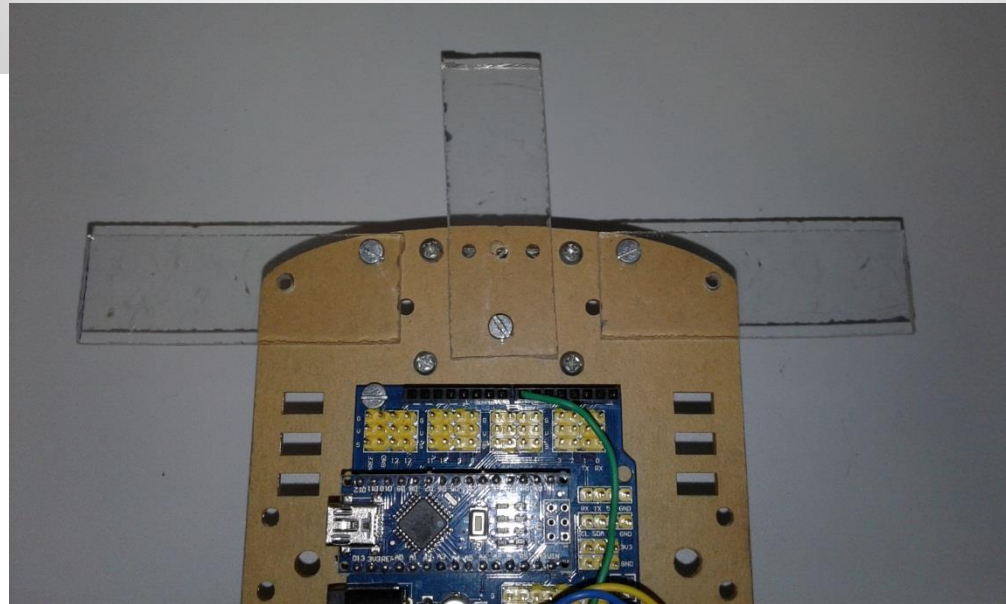
Smart Car Robot "blocks"



Robotics – Smart Car Robot

Smart Car Robot “Implementation”

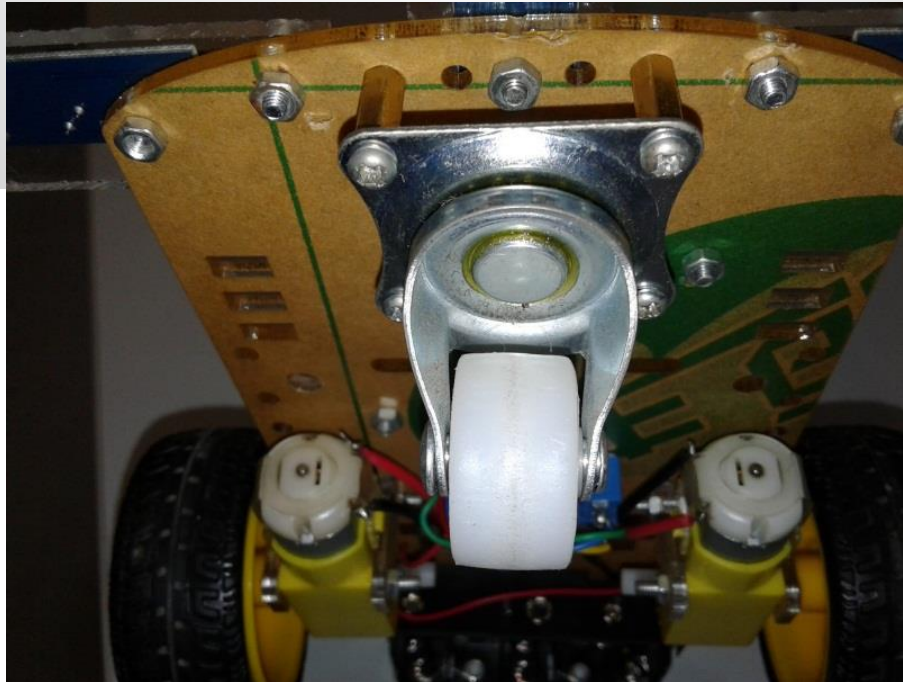
Place the acrylic in the correct positions and tighten with screws



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Smart Car Robot “Implementation”

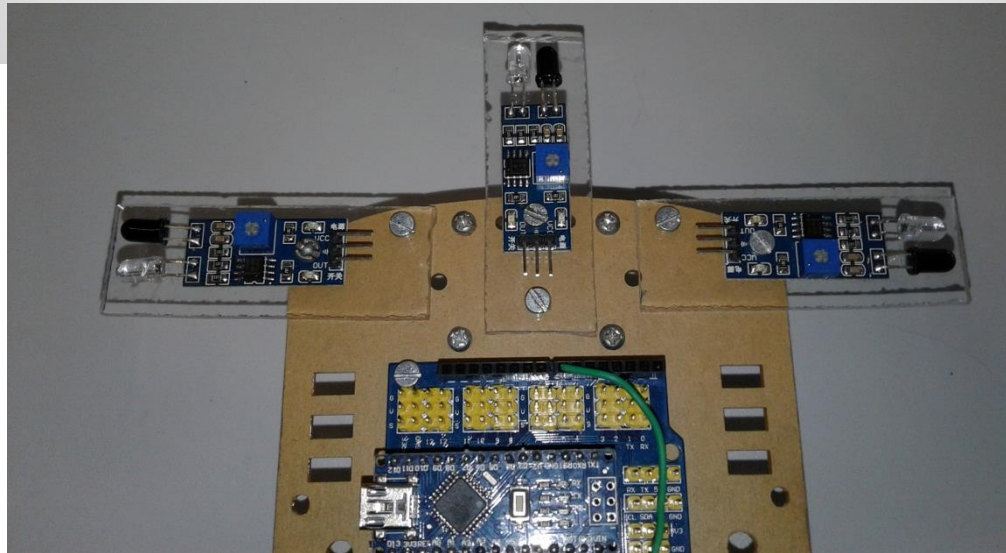
Place the universal wheel under the car chassis. You should put the fasteners and screws.



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Smart Car Robot “Implementation”

Put the optical sensor on top of each acrylic, and tighten the remaining screws.

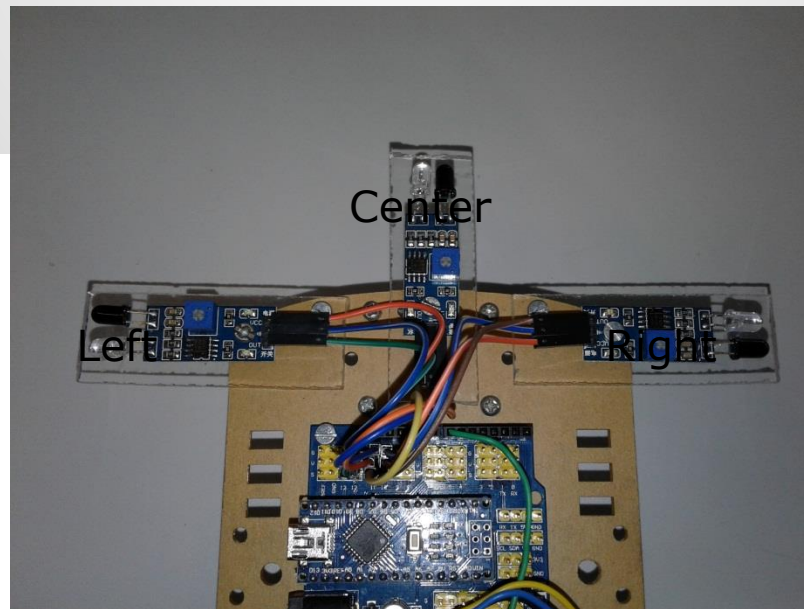


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Smart Car Robot “Implementation”

Connect the wires” 10cm female to female” to the Arduino and sensors according to the pinout, and colors of the wires.

Vcc → Red
Gnd → Blue
Signal 12 → Green
Signal 11 → Yellow
Signal 10 → Brown



Signal 12 to Left
Signal 11 to Center
Signal 10 to Right

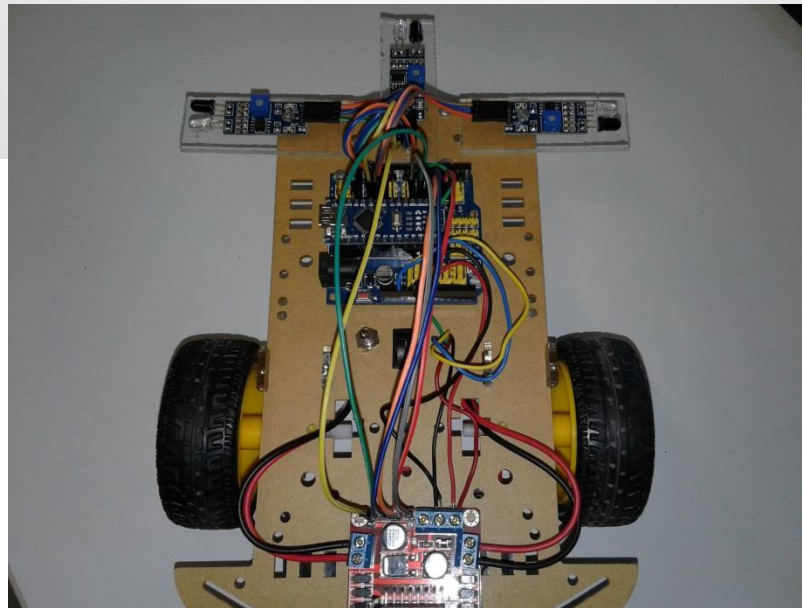


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Smart Car Robot “Implementation”

Connect the wires” 20cm female to female” to the Arduino and bridge H according to the pinout, and colors of the wires.

Signal 9 → Yellow
Signal 6 → Green
Signal 5 → Blue
Signal 4 → Orange
Signal 3 → Red
Signal 2 → Gray



Signal 9 to ENB
Signal 6 to ENA
Signal 5 to IN4
Signal 4 to IN3
Signal 3 to IN2
Signal 2 to IN1

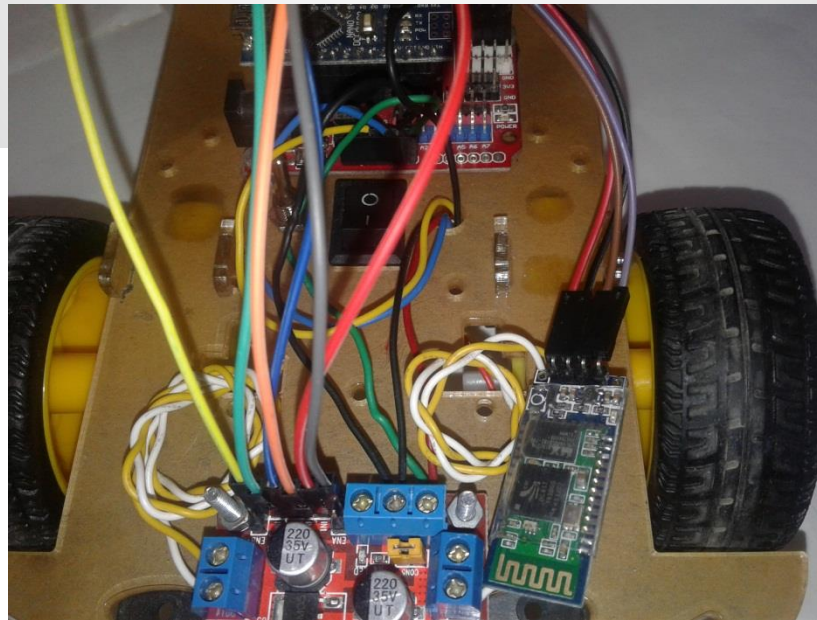


Robotics – Smart Car Robot

Smart Car Robot “Implementation”

Connect the wires” 10cm female to female” to the Arduino and bluetooth according to the pinout, and colors of the wires.

Vcc → Red
Gnd → Black
TX → White
RX → Brown



TX to RX
RX to TX



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Smart Car Robot “Programming”

The bridge H is the component responsible for the speed and reversing the engines of the Smart car Robot.

The bridge H is the component responsible for the speed and reversing the engines of the Smart car Robot. According to the logical state of the sensors of the vehicle rotates in one direction.

S Left	S Center	S Right	IN1	IN2	IN3	IN4	Direction
1	1	0	0	1	1	0	FRONT
1	0	1	1	0	0	1	BACK
0	1	1	1	0	0	0	RIGHT
1	1	0	0	0	1	0	LEFT



Robotics- Smart Car Robot

Smart Car Robot "Programming"

Open the file Smart Car Robot and complete the code of programming.

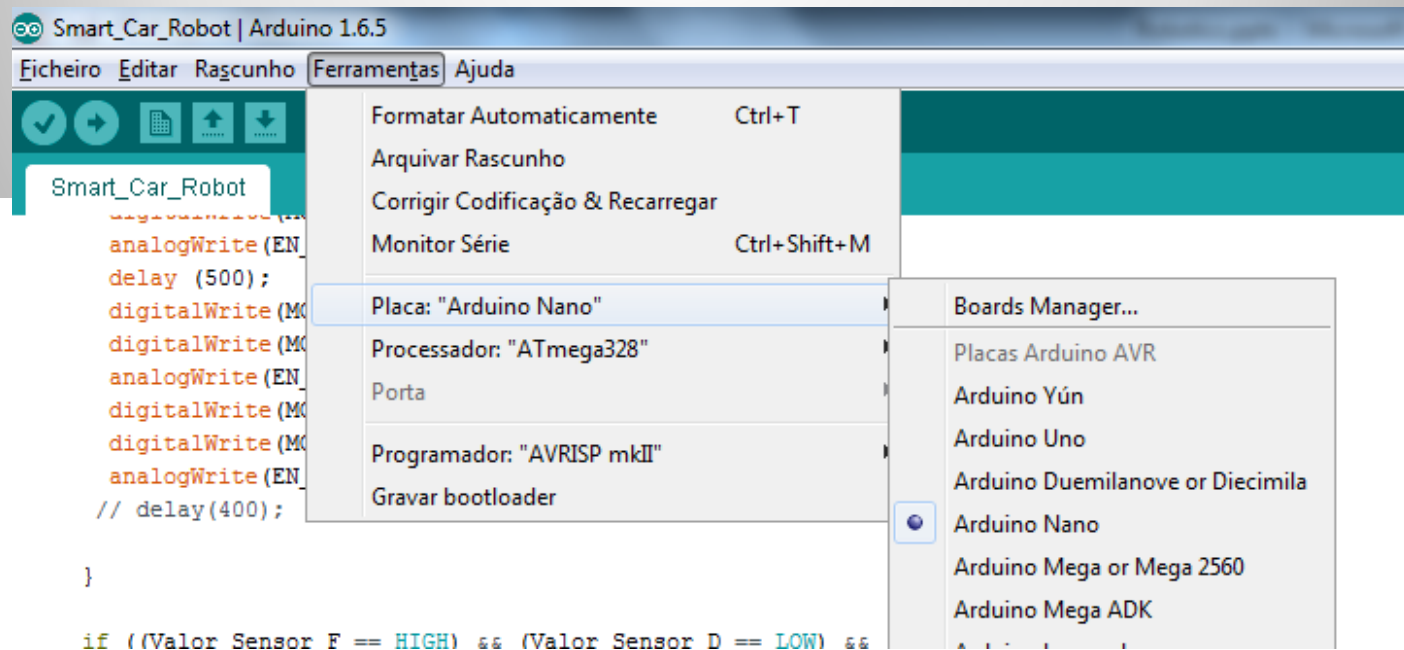
```
if ((Valor_Sensor_F == ) && (Valor_Sensor_D == ) && (Valor_Sensor_E == )) //LEFT
{
    digitalWrite(MOTORDA, );
    digitalWrite(MOTORDR, );
    analogWrite(EN_D, 255);
    digitalWrite(MOTOREA, );
    digitalWrite(MOTORER, );
    analogWrite(EN_E, 100);
}
```



Robotics – Smart Car Robot

Smart Car Robot “Connect and UpLoad”

Connect the USB cable from the PC to the Arduino and selects the correct board and its port. Then uploads the program



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Smart Car Robot "Connect and UpLoad"

Install the application for controlling the Smart Car Robot and enjoy.

Barcode link for Smart_Car_Robot

