EE437 Team 5

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Description:

The project chosen by the members of Team 5 is titled “Autonomous robot car with a smartphone interface.” The goal of our project is to develop an application to control a 4-wheeled car as well as the Arduino code to interface with this. The phone and the car should communicate using Bluetooth. The minimum functionality of the car is to be capable of driving forward, backwards, turning right and left, as well as stopping. The car should communicate with an ultrasonic distance sensor to prevent itself from being driven into obstacles. A custom PCB will be designed to house the connections to the Bluetooth module, ultrasonic sensor, and the controls for the motor driver.

Parts List:

2x 8 Pin Header

1x 10 Pin Header

1x 6 Pin Header

2x 1 kΩ Resistor

1x 2 kΩ Resistor

8x 1N4004 Diodes

2x 2 Pin Terminal Block

1x 5mm Green LED

2x 220 µF 35V Capacitor

1x L298 IC

1x REG1117 Voltage Regulator

1x HC-SR04 Ultra sonic sensor

1x HC-05 Bluetooth module

4x DC Motors

1x SG90 Servo Motor

2x 18650 Batteries

1x Custom PCB

