

Obstacle Avoidance Bot Using NodeMCU

1. Ultrasonic Sensor (HC-SR04)

Ultrasonic Sensor (HC-SR04):

| Sensor Pin | Connected to NodeMCU | Purpose | |
|------------|----------------------|-------------------|--|
| ----- | ----- | ----- | |
| VCC | 3.3V or 5V | Power supply | |
| GND | GND | Ground | |
| Trig | D1 (GPIO 5) | Trigger signal | |
| Echo | D2 (GPIO 4) | Echo signal input | |

2. Motor Driver Connections

Motor Driver (L298N or similar):

| Motor Driver Pin | Connected to NodeMCU | Motor Side | Function | |
|------------------|----------------------|-------------|---------------|--|
| ----- | ----- | ----- | ----- | |
| IN1 | D5 (GPIO 14) | Left Motor | Control pin 1 | |
| IN2 | D6 (GPIO 12) | Left Motor | Control pin 2 | |
| IN3 | D7 (GPIO 13) | Right Motor | Control pin 3 | |
| IN4 | D8 (GPIO 15) | Right Motor | Control pin 4 | |

3. RemoteXY Wi-Fi Configuration

RemoteXY Wi-Fi Configuration:

| | | |
|------------|----------|--|
| Wi-Fi SSID | Car | |
| ----- | ----- | |
| Password | 12345678 | |
| Port | 6377 | |

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4. RemoteXY Button Mapping

RemoteXY Button Mapping:

| Button | RemoteXY Variable | Function Called | Description |
|------------|-------------------|-----------------|------------------------------------|
| Forward | button_02 | forward() | Moves forward if no obstacle ahead |
| Reverse | button_01 | reverse() | Moves backward |
| Left Turn | button_03 | anticlock() | Rotates left |
| Right Turn | button_04 | clockwise() | Rotates right |