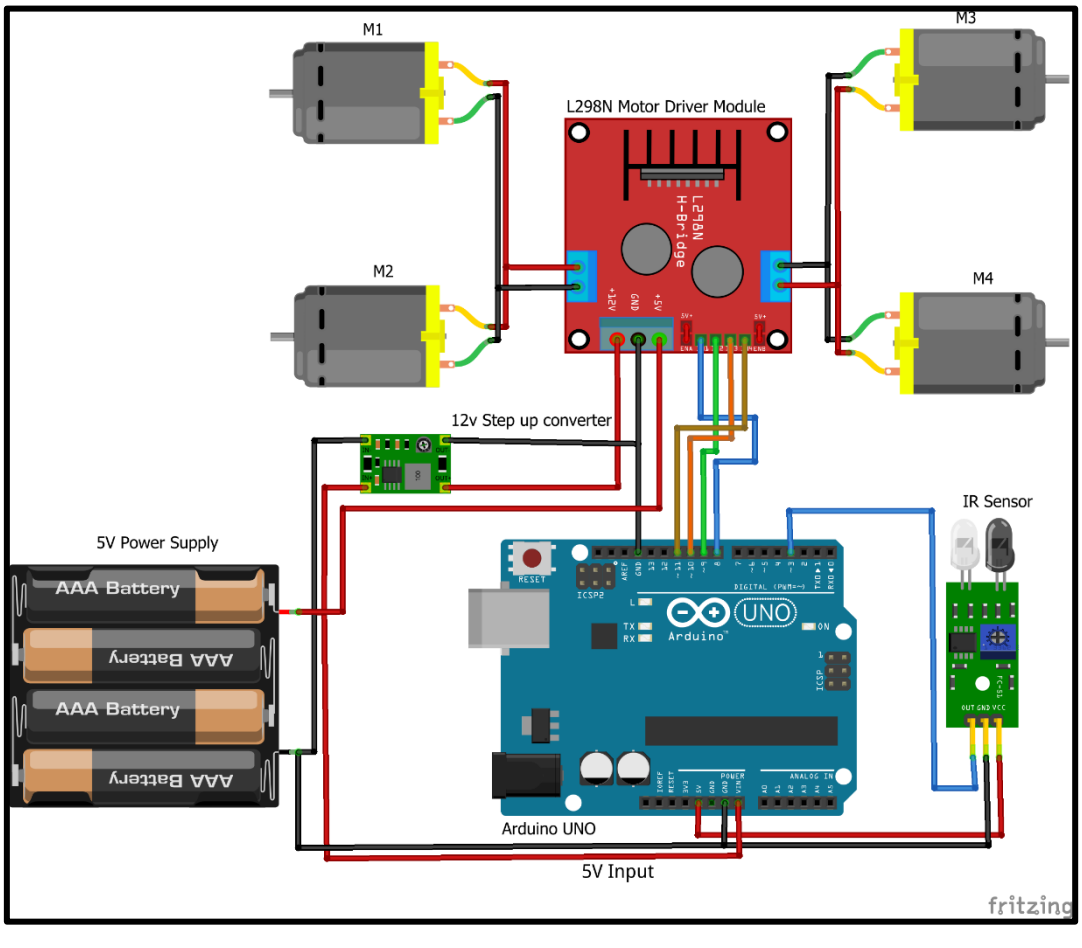
Obstacle Avoiding Car Using IR Sensor

Using this project, we can make car which turn left or right when any object is detected in defined range. In real-life we can say that using this project we can avoid car accidents in future.

Required Component

- **Hardware:**
  - Arduino UNO
  - IR(Infrared) Sensor
  - L298N Motor driver Module
  - Robotics Kit (4 DC Motors, Wheels, Chassis)
  - Battery Pack (5V and 12V)
- **Software:**
  - PC: Arduino IDE

Circuit Diagram:



Arduino code:

```
const int IN1 = 8;
const int IN2 = 9;
const int IN3 = 10;
const int IN4 = 11;
long duration, distance;

void setup()
{
  pinMode(3, INPUT);
  pinMode (IN1, OUTPUT);
  pinMode (IN2, OUTPUT);
  pinMode (IN3, OUTPUT);
  pinMode (IN4, OUTPUT);
  Serial.begin(9600);
}

void loop()
{
  int IR = digitalRead(3);
  Serial.println(IR);
  if (IR == LOW)
  {
    digitalWrite(IN1, LOW);
    digitalWrite(IN2, HIGH);
    digitalWrite(IN3, HIGH);
    digitalWrite(IN4, LOW);
    delay(200);

    digitalWrite(IN1, HIGH);
    digitalWrite(IN2, HIGH);
    digitalWrite(IN3, LOW);
    digitalWrite(IN4, LOW);
    delay(500);
  }
  else
  {
    digitalWrite(IN1, HIGH);
    digitalWrite(IN2, LOW);
    digitalWrite(IN3, HIGH);
    digitalWrite(IN4, LOW);
  }
  delay(100);
}
```

Instructions:

- Connect all component as shown in circuit diagram.
- Use glue gun to stick the IR Sensor Infront of the chassis of car model.
- Use cable ties to do wiring properly and then connect battery.
- Enjoy the ride.