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int leftside0 = 0; //create a variable and set it to 0
  int leftside1 = 0;
  int rightside2 = 0;
  int rightside3 = 0;

const int pwm = 3 ; //initializing pin 2 as pwm
const int in_1 = 12 ; //initializing pin 12 as a motor direction
const int in_2 = 13 ; //initializing pin 13 as the opposite motor direction

void setup()
{
  Serial.begin(9600); //Begin serial communication
  pinMode(pwm,OUTPUT) ; //we have to set PWM pin as output
pinMode(in_1,OUTPUT) ; //Logic pins are also set as output
pinMode(in_2,OUTPUT) ;
}

void loop()
{

leftside0 = (abs(analogRead(A0))); //read value from photoresistor (light sensor) connected to
pin A0 on the Arduino
leftside1 = (abs(analogRead(A1))); //read value from photoresistor connected to pin A1
rightside2 = (abs(analogRead(A2))); //read value from photoresistor connected to pin A2
rightside3 = (abs(analogRead(A3))); //read value from photoresistor connected to pin A3

  //if average of left side photoresistors - average of right side photoresistors is >3

  if (((leftside0+leftside1)/2)-((rightside2+rightside3)/2)>6) {

    while((((leftside0+leftside1)/2)-((rightside2+rightside3)/2)>6))
    {
      digitalWrite(in_1,LOW) ; //spin motor
      digitalWrite(in_2,HIGH) ;
      analogWrite(pwm,70) ; //motor speed
      leftside0 = (abs(analogRead(A0))); //read value from photoresistor (light sensor) connected
to pin A0 on the Arduino
      leftside1 = (abs(analogRead(A1))); //read value from photoresistor connected to pin A1
      rightside2 = (abs(analogRead(A2))); //read value from photoresistor connected to pin A2
      rightside3 = (abs(analogRead(A3))); //read value from photoresistor connected to pin A3
    }
  }
}

```

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else if (((rightside2+rightside3)/2)-((leftside0+leftside1)/2)>6) {

    while(((rightside2+rightside3)/2)-((leftside0+leftside1)/2)>6)
    {

        digitalWrite(in_1,HIGH) ; //spin motor opposite way as previous case
        digitalWrite(in_2,LOW) ;
        analogWrite(pwm,70) ; //motor speed
        leftside0 = (abs(analogRead(A0))); //read value from photoresistor (light sensor) connected to
pin A0 on the Arduino
        leftside1 = (abs(analogRead(A1))); //read value from photoresistor connected to pin A1
        rightside2 = (abs(analogRead(A2))); //read value from photoresistor connected to pin A2
        rightside3 = (abs(analogRead(A3))); //read value from photoresistor connected to pin A3}

    }
}

    //if neither subtraction of averages gets a value >6
    digitalWrite(in_1,LOW) ; //don't spin motor
    digitalWrite(in_2,LOW) ;
    analogWrite(pwm,70) ;

    Serial.print("Pin Number A0: ");
    Serial.println(leftside0);

    Serial.print("Pin Number A1: ");
    Serial.println(leftside1);

    Serial.print("Pin Number A2: ");
    Serial.println(rightside2);

    Serial.print("Pin Number A3: ");
    Serial.println(rightside3);

    Serial.print("AverageLeft: ");
    Serial.println((leftside0+leftside1)/2);

    Serial.print("AverageRight: ");
    Serial.println((rightside2+rightside3)/2);

    Serial.println();

```

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//everything above that says "Serial" shows the values from the photoresistors on the Arduino  
Serial monitor on a computer
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}
```