Line Follower Robot

**Ardino-UNO Code:**

// Arduino Line Follower Robot Code

#define enA 5//Enable1 L293 Pin enA

#define in1 6 //Motor1 L293 Pin in1

#define in2 7 //Motor1 L293 Pin in1

#define in3 9 //Motor2 L293 Pin in1

#define in4 10 //Motor2 L293 Pin in1

#define enB 8 //Enable2 L293 Pin enB

#define R\_S 4//ir sensor Right

#define L\_S 2 //ir sensor Left

void setup(){

pinMode(R\_S, INPUT);

pinMode(L\_S, INPUT);

pinMode(enA, OUTPUT);

pinMode(in1, OUTPUT);

pinMode(in2, OUTPUT);

pinMode(in3, OUTPUT);

pinMode(in4, OUTPUT);

pinMode(enB, OUTPUT);

digitalWrite(enA, HIGH);

digitalWrite(enB, HIGH);

delay(1000);

}

void loop(){

if((digitalRead(R\_S) == 0)&&(digitalRead(L\_S) == 0)){forward();} //if Right Sensor and Left Sensor are at White color then it will call forword function

if((digitalRead(R\_S) == 1)&&(digitalRead(L\_S) == 0)){turnRight();} //if Right Sensor is Black and Left Sensor is White then it will call turn Right function

if((digitalRead(R\_S) == 0)&&(digitalRead(L\_S) == 1)){turnLeft();} //if Right Sensor is White and Left Sensor is Black then it will call turn Left function

if((digitalRead(R\_S) == 1)&&(digitalRead(L\_S) == 1)){Stop();} //if Right Sensor and Left Sensor are at Black color then it will call Stop function

}

void forward(){ //forword

digitalWrite(in1, HIGH); //Right Motor forword Pin

digitalWrite(in2, LOW); //Right Motor backword Pin

digitalWrite(in3, LOW); //Left Motor backword Pin

digitalWrite(in4, HIGH); //Left Motor forword Pin

}

void turnRight(){ //turnRight

digitalWrite(in1, LOW); //Right Motor forword Pin

digitalWrite(in2, HIGH); //Right Motor backword Pin

digitalWrite(in3, LOW); //Left Motor backword Pin

digitalWrite(in4, HIGH); //Left Motor forword Pin

}

void turnLeft(){ //turnLeft

digitalWrite(in1, HIGH); //Right Motor forword Pin

digitalWrite(in2, LOW); //Right Motor backword Pin

digitalWrite(in3, HIGH); //Left Motor backword Pin

digitalWrite(in4, LOW); //Left Motor forword Pin

}

void Stop(){ //stop

digitalWrite(in1, LOW); //Right Motor forword Pin

digitalWrite(in2, LOW); //Right Motor backword Pin

digitalWrite(in3, LOW); //Left Motor backword Pin

digitalWrite(in4, LOW); //Left Motor forword Pin

}