İSTANBUL BİLGİ UNIVERSITY

VCD 481.01

Artglint

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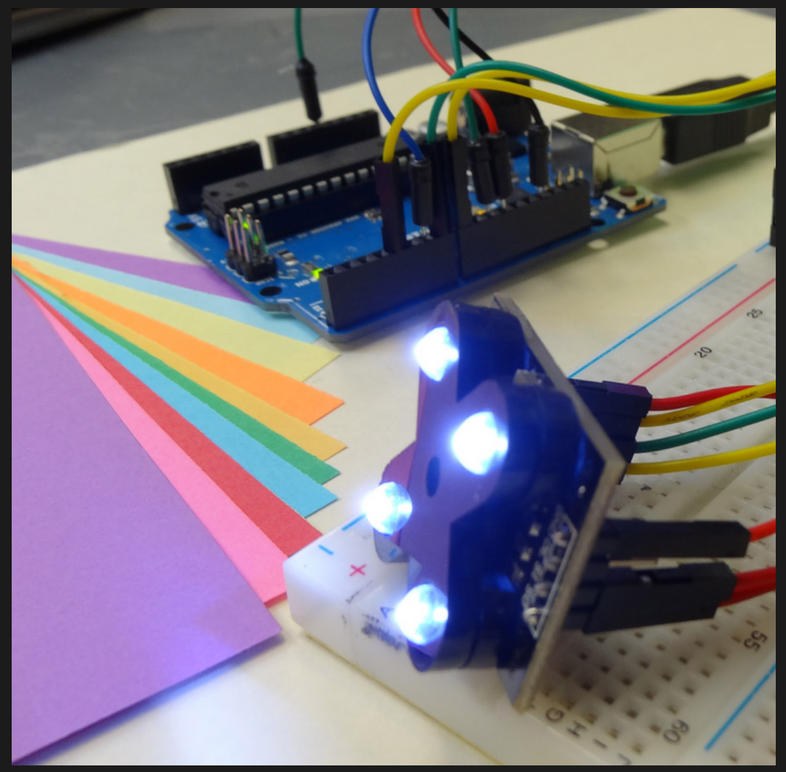
Artglint
Project

Contents

Project Concept

The aim of this project is to make the paintings made with ghost paints look more effective and aesthetic at night. I will control the ambient light from the canvas by using a sensor.



Interaction

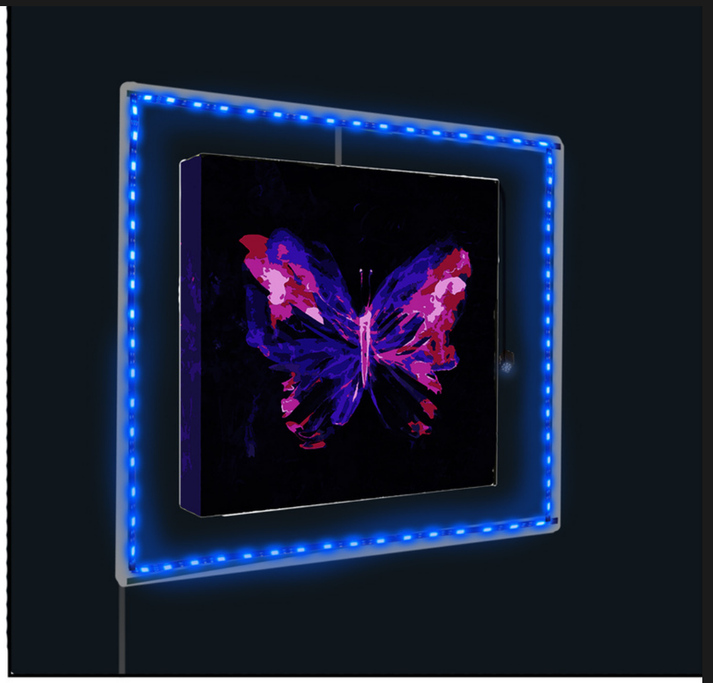
EASY TO USE!

I will provide the color change in the light by moving the color detector sensor on the canvas.

Storyboard

closed system / daylight

When night falls, the desired color in the canvas is read by the color recognition sensor.



The led strip changes color according to the color detector.

Materials

Arduino uno R3
Jumper wires
TCS3200 color sensor
5V RGB Led strip
5V 2A Adapter
12V 1A Adapter
1k resistance x3
TIP31 Transistor x3
Insulating tape
Nano tape
Wooden frame

TCS3200 COLOR SENSOR

RGB LED STRIP

ARDUINO UNO R3

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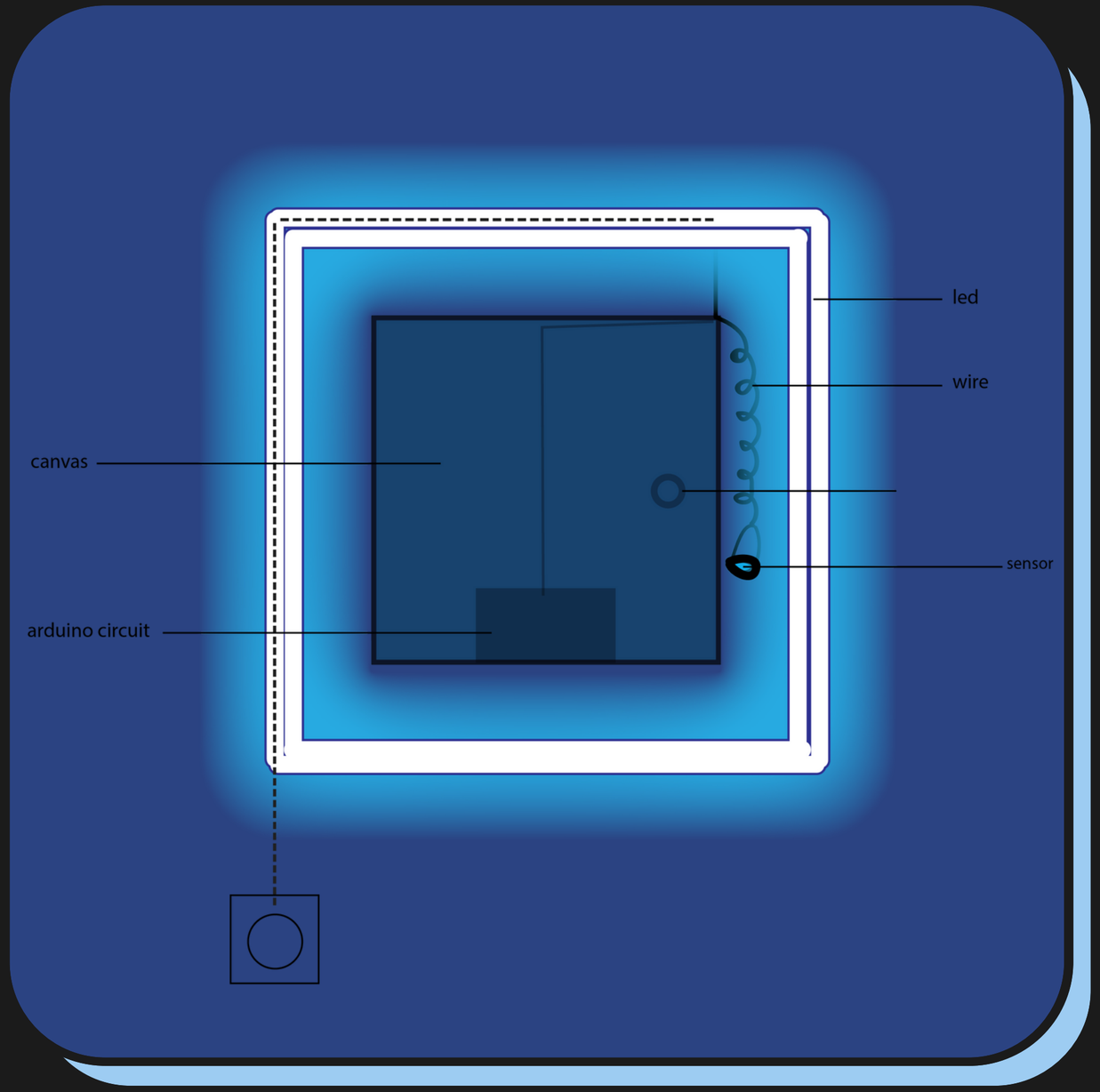
Contraption Plan

I'll hide the circuit and the cables behind the canvas.



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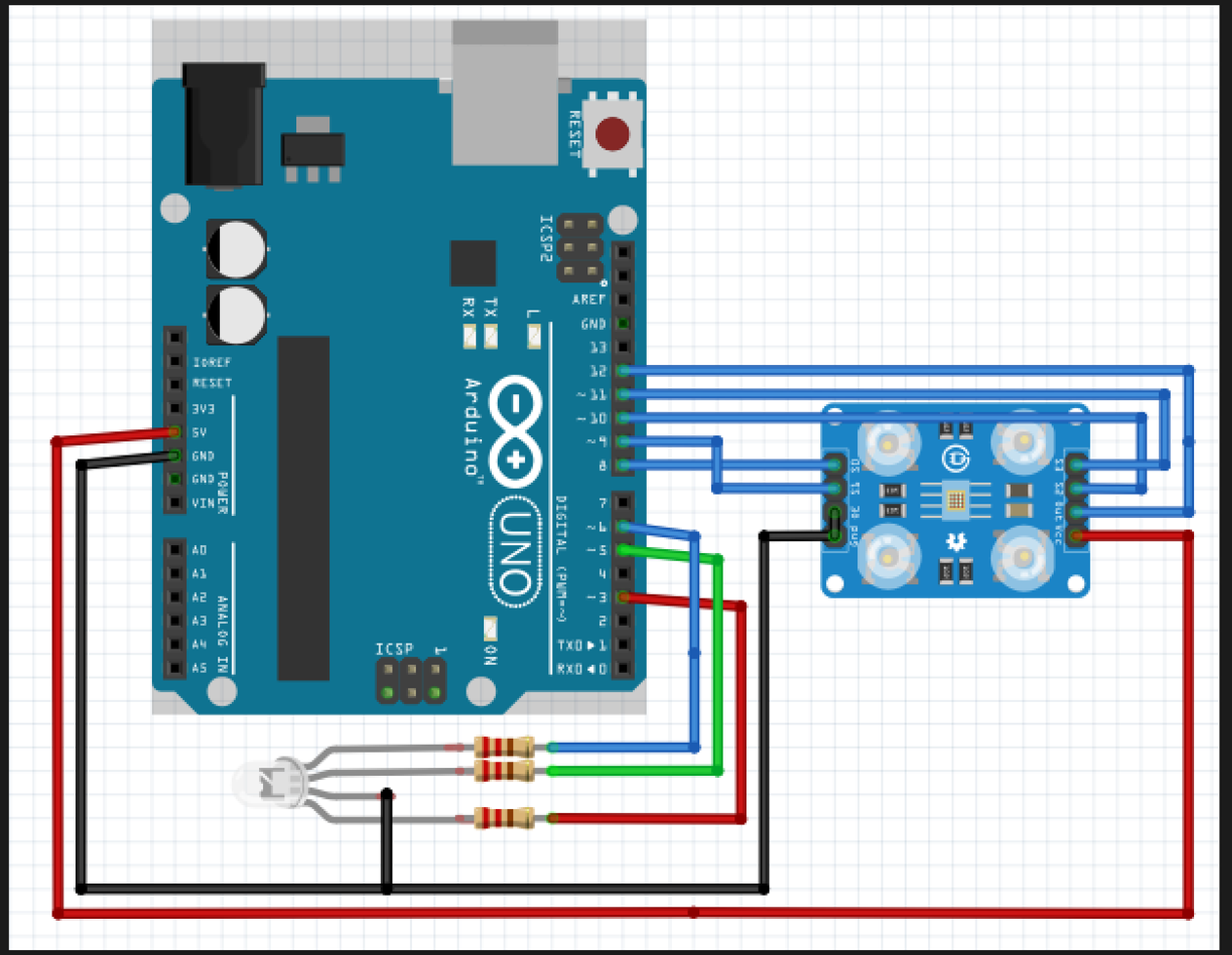
Shematics & Code


```
#define s0 8        //Module pins wiring
#define s1 9
#define s2 10
#define s3 11
#define out 12

#define LED_R 3    //LED pins
#define LED_G 5
#define LED_B 6
int Red=0, Blue=0, Green=0;
```



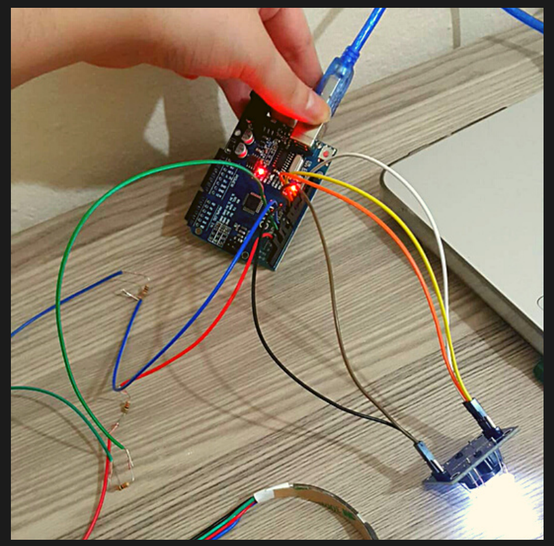
Shematics & Code


```
void setup()
{
    pinMode(LED_R,OUTPUT);
    pinMode(LED_G,OUTPUT);
    pinMode(LED_B,OUTPUT);

    pinMode(s0,OUTPUT);
    pinMode(s1,OUTPUT);
    pinMode(s2,OUTPUT);
    pinMode(s3,OUTPUT);
    pinMode(out,INPUT);

    Serial.begin(9600);

    digitalWrite(s0,HIGH);
    digitalWrite(s1,HIGH);

}
```

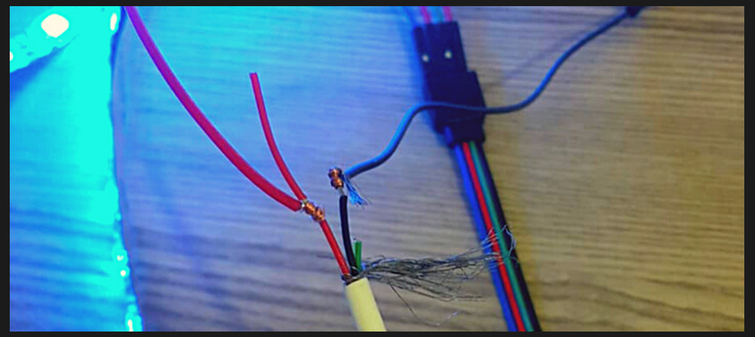
```
void loop()
{
  GetColors();

  analogWrite(LED_R,map(Red,15,60,255,0));

  analogWrite(LED_G,map(Green,30,55,255,0));
  analogWrite(LED_B,map(Blue,13,45,255,0));

}
```

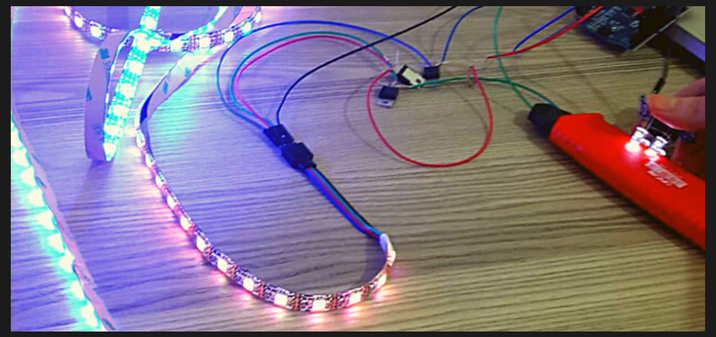
```
void GetColors()
{
  digitalWrite(s2, LOW);
  digitalWrite(s3, LOW);
  Red = pulseIn(out, digitalRead(out) == HIGH ? LOW : HIGH);
  delay(20);
  digitalWrite(s3, HIGH);
  Blue = pulseIn(out, digitalRead(out) == HIGH ? LOW : HIGH);
  delay(20);
  digitalWrite(s2, HIGH);
  Green = pulseIn(out, digitalRead(out) == HIGH ? LOW : HIGH);
  delay(20);
}
```

Making Process



→ https://youtu.be/blkO5utvSbA





Finished Version

→ https://youtu.be/Gmu4o4GPjPA

THANKS FOR ATTENTION

References

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