CIM 540/640

Section 4F/4H

Assignment Wk 13

Zhengrong Hu

# Progress Report #1:

Project Name: IN & OUT

Location: Miami River

Description: Public Swimming pool lighting installation which trying to evoke community attention to water quality and sea level rise.

Checklist:

- ✓ Arduino Code
- ✓ P5JS Web Code flocking
- Bridging Arduino data to web
- Simulation for LED Matrix

Introduction:

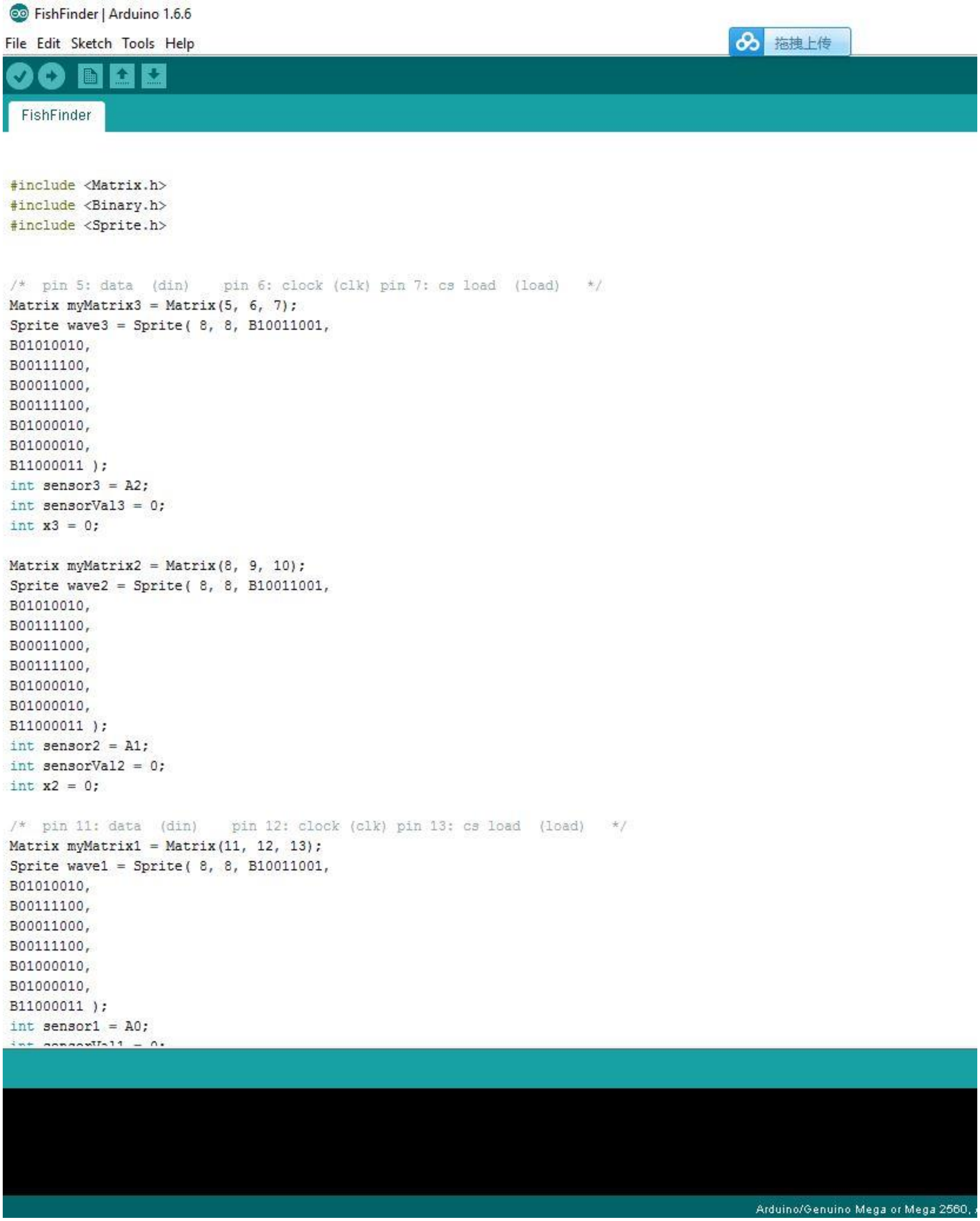
This project is meant to use web application as a data visualization tool to address people’s attention about our environment, especially those information that rarely being captured by humans. In this case, I am proposing building a lighting installation at the Lummus Park near the Miami River. The installation has three components:

1: fish sensor (inside the Miami River)

2: LED Matrix Installation (near the swimming pool)

3: Website to bridge the data input and data output (internet)

The fish sensors will collecting real-time data about the fish movement inside the Miami River and sending those data to website. The website will receive, store and sending those parsed data to LED Matrix Installation and display the visual interpretation of those data.

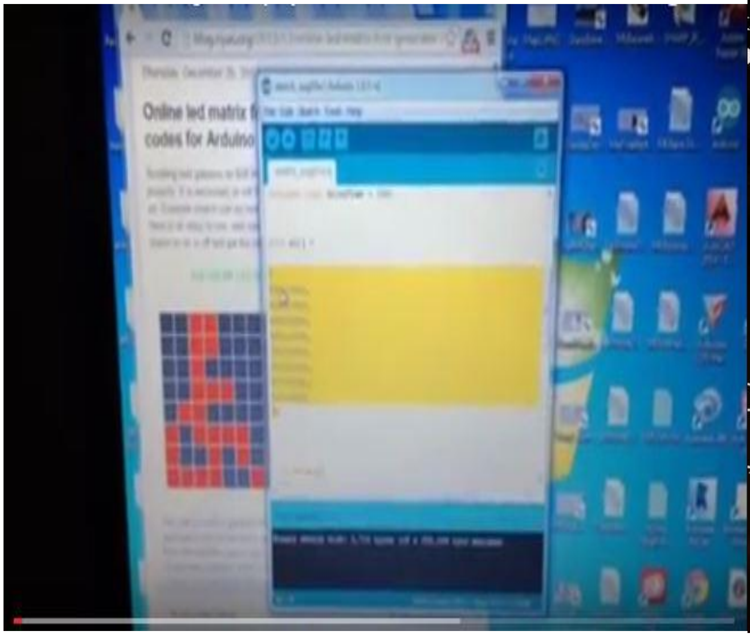

FishFinder | Arduino 1.6.6
File Edit Sketch Tools Help
拖拽上传
FishFinder
Arduino/Genuino Mega or Mega 2560,

```
#include <Matrix.h>
#include <Binary.h>
#include <Sprite.h>


/*  pin 5: data  (din)    pin 6: clock (clk) pin 7: cs load  (load)   */
Matrix myMatrix3 = Matrix(5, 6, 7);
Sprite wave3 = Sprite( 8, 8, B10011001,
B01010010,
B00111100,
B00011000,
B00111100,
B01000010,
B01000010,
B11000011 );
int sensor3 = A2;
int sensorVal3 = 0;
int x3 = 0;

Matrix myMatrix2 = Matrix(8, 9, 10);
Sprite wave2 = Sprite( 8, 8, B10011001,
B01010010,
B00111100,
B00011000,
B00111100,
B01000010,
B01000010,
B11000011 );
int sensor2 = A1;
int sensorVal2 = 0;
int x2 = 0;

/*  pin 11: data  (din)    pin 12: clock (clk) pin 13: cs load  (load)   */
Matrix myMatrix1 = Matrix(11, 12, 13);
Sprite wave1 = Sprite( 8, 8, B10011001,
B01010010,
B00111100,
B00011000,
B00111100,
B01000010,
B01000010,
B11000011 );
int sensor1 = A0;
int sensorVal1 = 0;
```



## Arduino Code Plan:

```
1: Preload Images (Binary information from parsing images)

2: Set up sensor # 1, sensor #2 sensor #3 and pin to analog read

3: Check sensor #1, sensor #2, sensor #3

        If: fish is far away

        >>> Clear screen

        else if: fish is near sensor #1:

        >>>Display image #1


        else if: fish is near sensor #2:

        >>>Display image #2


        else if: fish is near sensor #3:

         >>>Display image #3
```