Videos

Sesión 1

- concierto solenoide:
  https://www.youtube.com/watch?v=g_hiz-Kx0kM&list=PL341E603FB13FE2D3&ab_channel=reduzent

- Processing & Kinect Sensor: Finger Tracking + OSCP5 + Pure Data + Arp2600
  https://www.youtube.com/watch?v=X5WGyJPS_5s

- Experimento de resonancia acustica:
  https://www.youtube.com/watch?v=wvJAgrUBF4w&ab_channel=brusspup
- Graffiti Laser: http://www.graffitiresearchlab.com/blog/projects/laser-tag/
- Delicate boundaries: http://csugrue.com/delicateboundaries/
- Licuadora que funciona con gruñidos:https://youtu.be/6DDkwdPaYmk
- Almacenador de gritos: https://youtu.be/Ta7rN5TeKzw
- Drawdio: https://www.youtube.com/watch?v=Ein9asQgfB8 y
  https://www.youtube.com/watch?v=HYg8iycYZNs&t=2s
- sensor pez: https://twitter.com/unloquer/status/1099095464291508224
- planta feliz: https://www.youtube.com/shorts/YAsNIonSBac
- juego de cubos en una caja :https://www.youtube.com/shorts/YZ7aAG4DWZk
- pelotica:https://www.youtube.com/shorts/9eLff37aS4U
- pez automata:https://youtu.be/HH9lDf5W-gU
- concierto de 8bits: https://youtu.be/nE3JVpOwWuU
- Lista de reproduccion:
  https://www.youtube.com/playlist?list=PL36dJutVa9QZj95urcHqORXl1mH-VnsEN
- galería de algunos sensores:https://twitter.com/jero98772/status/1383031921484165120
- multimedia de jugetes: https://wiki.unloquer.org/personas/jero98772/taller_explora/multimedia
- Taller de aire y vestuario: https://www.flickr.com/photos/37012247@N06/49257858968/

Sesión 2

Para generar ideas:

Sensores de calidad del aire y weareables: https://youtu.be/8ZFxrDkVOFk

Sesión 3

Para crear los conceptos:

Comprender el mundo a través de los datos: https://www.youtube.com/watch?v=iqaVe1MCTlA

¿Para que sirven los datos?

https://www.behance.net/gallery/82992729/Dear-Data-Postcard

http://www.visualcomplexity.com/vc/project_details.cfm?id=666&index=27&domain=Music

Componentes

ESP 8266
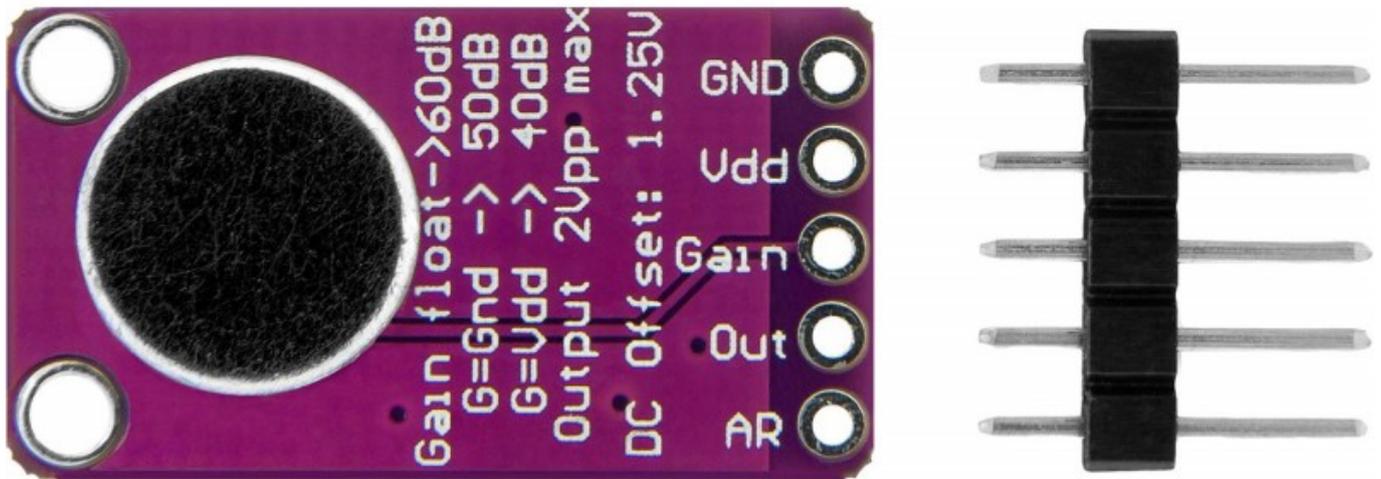
https://bigl.es/content/images/2018/10/Wemos-D1-Mini.png
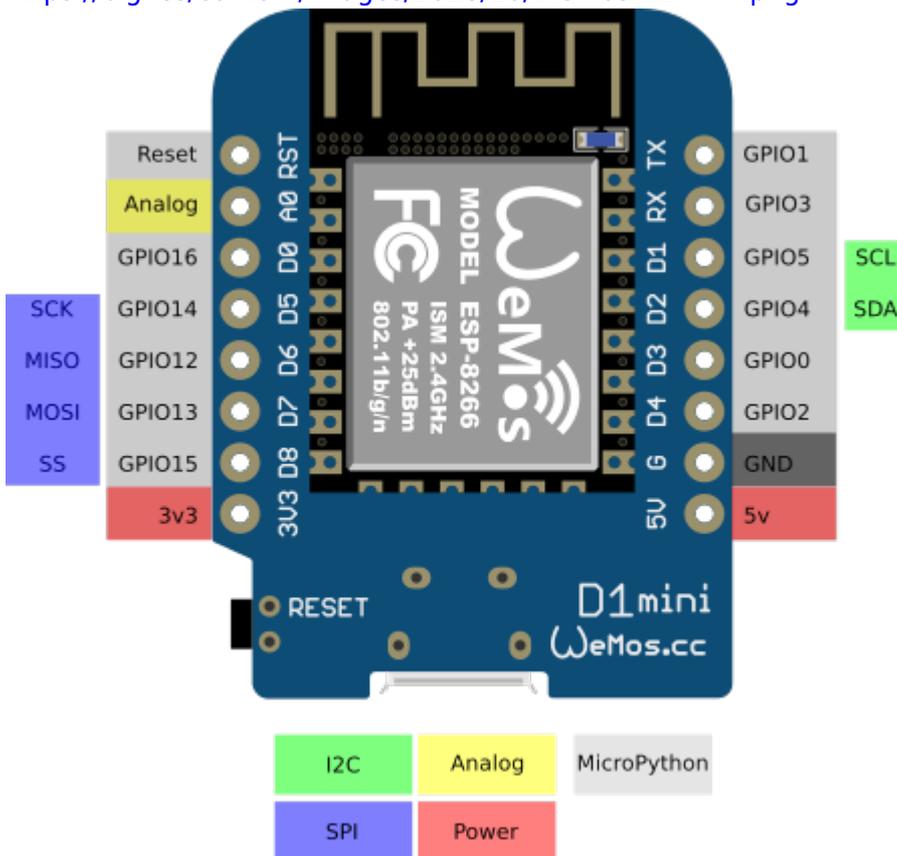
Micrófono

Info del Micrófono

https://maxelectronica.cl/3891-thickbox_default/modulo-max9814-sensor-de-sonido-microfono-electret-20-20khz.jpg

Amplificador

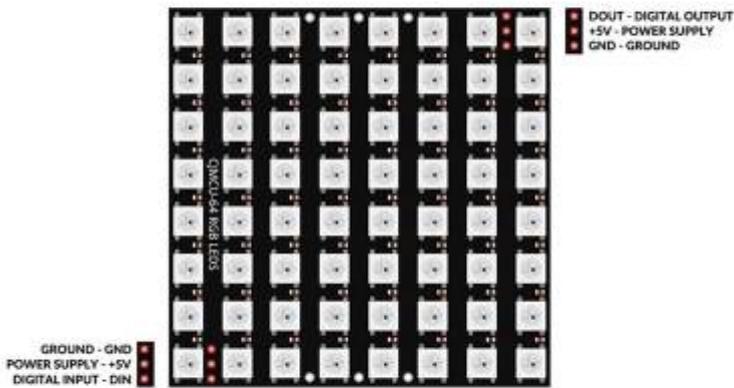https://www.maximintegrated.com/en/products/analog/audio/MAX9814.html

Matriz de leds

https://img.bestdealplus.com/ae04/kf/H0a03f4ded2694b5f8ec2324c68521a6b5.jpg

U64 LED Matrix Panel module
Pinout

DOUT - DIGITAL OUTPUT
+5V - POWER SUPPLY
GND - GROUND

GROUND - GND
POWER SUPPLY - +5V
DIGITAL INPUT - DIN

Aplicación Android

https://play.google.com/store/apps/details?id=name.antonsmirnov.android.arduinodroid2&hl=es&gl=CO

Entorno para desktop

Windows:https://www.arduino.cc/en/software

Github y Código

Repositorios de github: https://github.com/unloquer/ETSesnor

Repositorio del código sesión 2: intensidad

https://github.com/unloquer/ETSesnor/blob/main/src/src.ino

Descargar repositorio codigo

https://github.com/unloquer/ETSesnor

ejemplo.ino

```cpp
#include <FastLED.h>
#define LED_PIN D3
#define LED_TYPE WS2812B
#define COLOR_ORDER GRB
#define amarillo CRGB::Yellow
#define negro CRGB::Black
#define rojo CRGB::Red
#define azul CRGB::Blue

const uint8_t matrixWidth  = 8;
const uint8_t matrixHeight = 8;
#define NUM_LEDS (matrixWidth * matrixHeight)

int BRIGHTNESS = 60;
CRGB leds[matrixWidth * matrixHeight];

int loop_cnt = 0;
const int sampleWindow = 50; // Sample window width in mS (50 mS =
20Hz)
unsigned int sample;

void setup() {
  Serial.begin(115200);
  LEDS.addLeds<LED_TYPE,LED_PIN,COLOR_ORDER>(leds,NUM_LEDS);
  FastLED.setBrightness(BRIGHTNESS);
}

#define ESCENAS 1
CRGB matrix[ESCENAS][8][8] = {
  {
    {azul, azul, azul,azul, azul, azul, azul,azul},
    {azul, azul, azul,azul, azul, azul, azul,azul},
    {azul, azul, azul,azul, azul, azul, azul,azul},
    {azul, azul, azul,azul, azul, azul, azul,azul},
    {azul, azul, azul,azul, azul, azul, azul,azul},
    {azul, azul, azul,azul, azul, azul, azul,azul},
    {azul, azul, azul,azul, azul, azul, azul,azul},
    {azul, azul, azul,azul, azul, azul, azul,azul},
  },
};

void loop() {
  for(int i = 0; i< matrixHeight; i++) {
    for(int j = 0; j< matrixWidth; j++) {
      leds[i*matrixWidth + j] = matrix[loop_cnt%ESCENAS][i][j];
    }
  }
  unsigned long startMillis = millis();  // Start of sample window
  unsigned int peakToPeak = 0;
```

```cpp
    unsigned int signalMax = 0;
    unsigned int signalMin = 1024;

    // collect data for 50 mS
    while (millis() - startMillis < sampleWindow)
     {
        sample = analogRead(0);
        if (sample < 1024) {
          if (sample > signalMax)
          {
            signalMax = sample;
          }
          else if (sample < signalMin)
          {
            signalMin = sample;
          }
        }

    }
    peakToPeak = signalMax - signalMin;
    int changeBrightness = map(peakToPeak, 20, 500, 0, 100);
    FastLED.setBrightness(changeBrightness);
    FastLED.show();
    Serial.println(peakToPeak);
    loop_cnt++;
    FastLED.clear();
}
```

From:
https://wiki.unloquer.org/ -

Permanent link:
https://wiki.unloquer.org/proyectos/talleres/ets/recursos?rev=1637376683

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