

IoT SEM BS

INTERNET OF “THINKING”

COM ESP8266



EDUARDO

ODA

CC BY-SA

GAROA
HACKER CLUBE



all4
DATA IN OPPORTUNITY OUT

WeMind
COMPETITIVE INTELLIGENCE



iot



IoT
A KIND OF
MAGIC

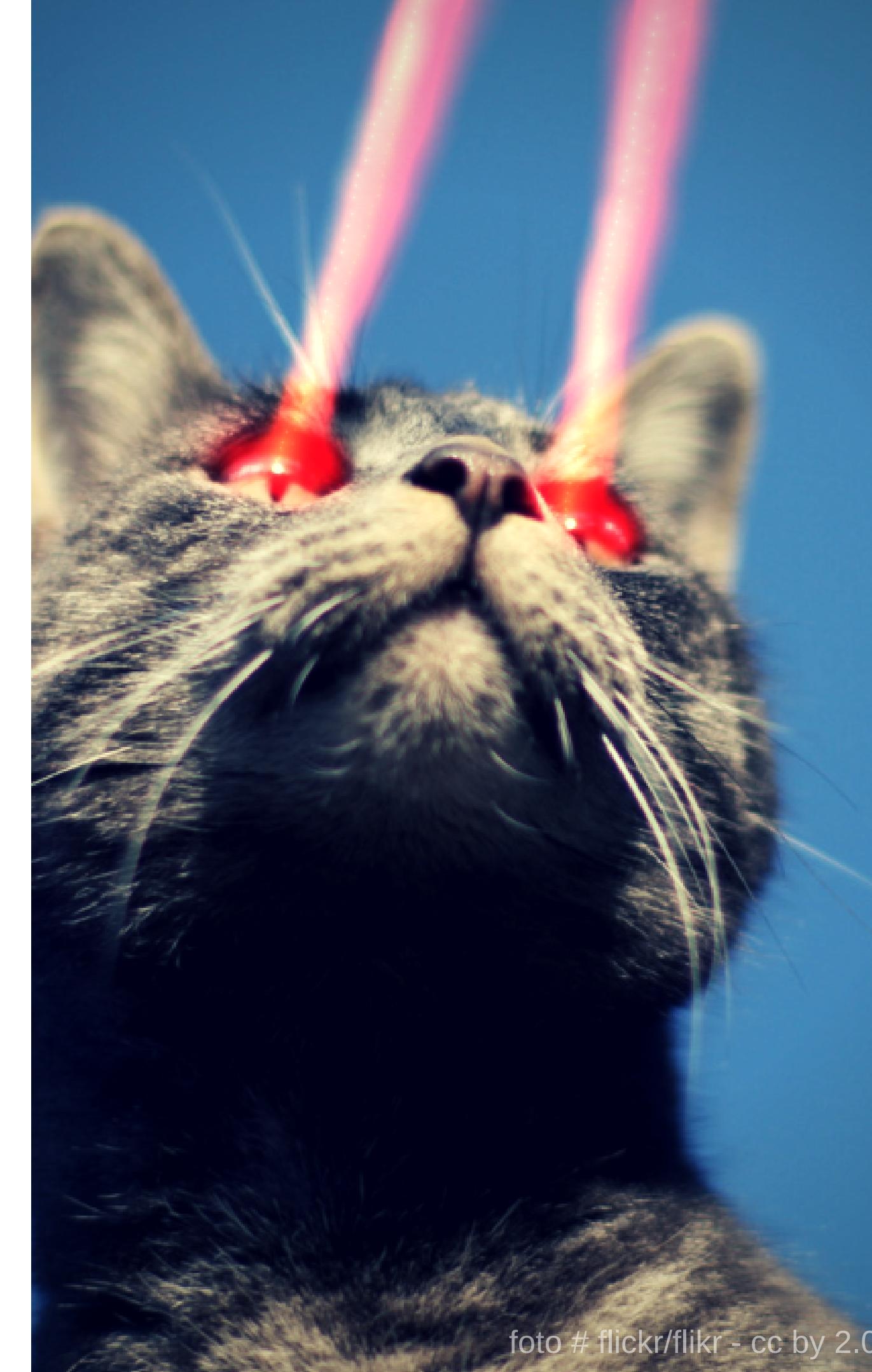


IoT
BUT NOT THIS
KIND OF MAGIC

NO BS

TEM GENTE
DIZENDO QUE
É DONA DO IoT

DEFENDER CAT





MUITOS
DISPOSITIVOS



MUITOS
DADOS



POUCA
ENERGIA



REQUISITOS



BAIXO CUSTO POR DISPOSITIVO



BONS PROTOCOLOS DE COMUNICAÇÃO



SERVIÇOS DE ARMAZENAGEM



BOAS INTERFACES

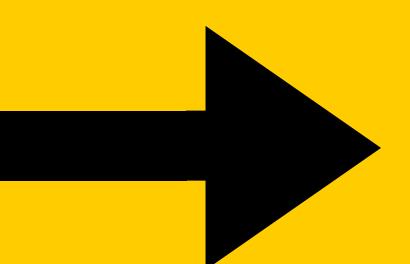


foto # flickr/jantik - cc by 2.0

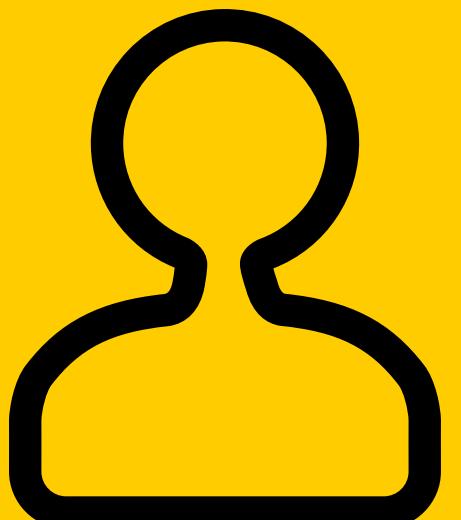
ESP8266

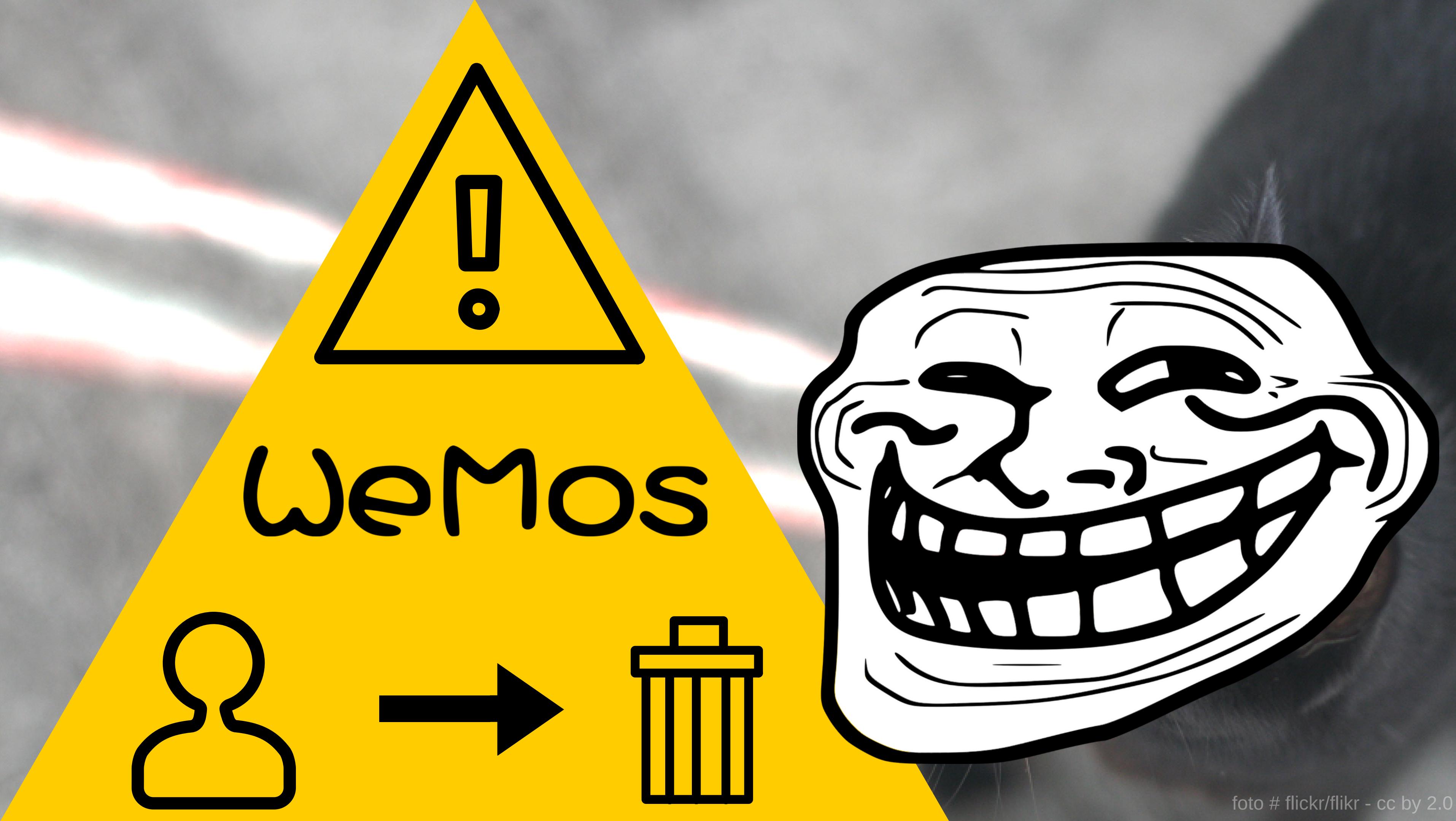
E S P R E S S I F
A I - T H I N K E R
W I T T Y
W E M O S
E T C

5 MIN PARA COMPRAS



WeMos





ESP8266



80 - 160 MHz

32 bit

3.3 V

15 - 170 mA

8 DIO

8 PWM

1 Analógica (1/3.2 V)

12 mA/Pin

512 - 4096 kB Flash

36 kB SRAM

0 kB EEPROM

0.9 uA deep sleep

Arduino Uno



16 MHz

8 bit

5 V

16 mA

14 DIO

6 PWM

6 Analógica

20 mA/Pin

32 kB Flash

2 kB SRAM

1 kB EEPROM

0.9 uA deep sleep

0.84 mA deep sleep

ESP8266



80 - 160 MHz

32 bit

15 - 17 V
3.3 V

\$4.99

512 - 4096 kB flash

3.6 kB SRAM

0 kB EEPROM

0.9 uA deep sleep

Arduino Uno



16 MHz

8 bit

5 V
16 V
3.3 V

\$3.99

2 kB

2 kB

1 kB

0.9 uA deep sleep

0.84 mA deep sleep



OMG

Arduino IDE

OTRAS



COSITAS

SPIFFS

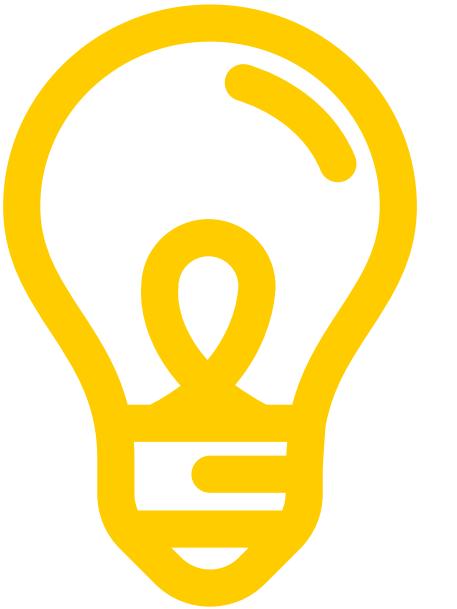
```
#include "FS.h"
SPIFFS.begin();
File myfile =
    SPIFFS.open("/name.txt",
                "r");
myfile.write(buf,size);
myfile.read (buf,size);
myfile.close();
```

OTA

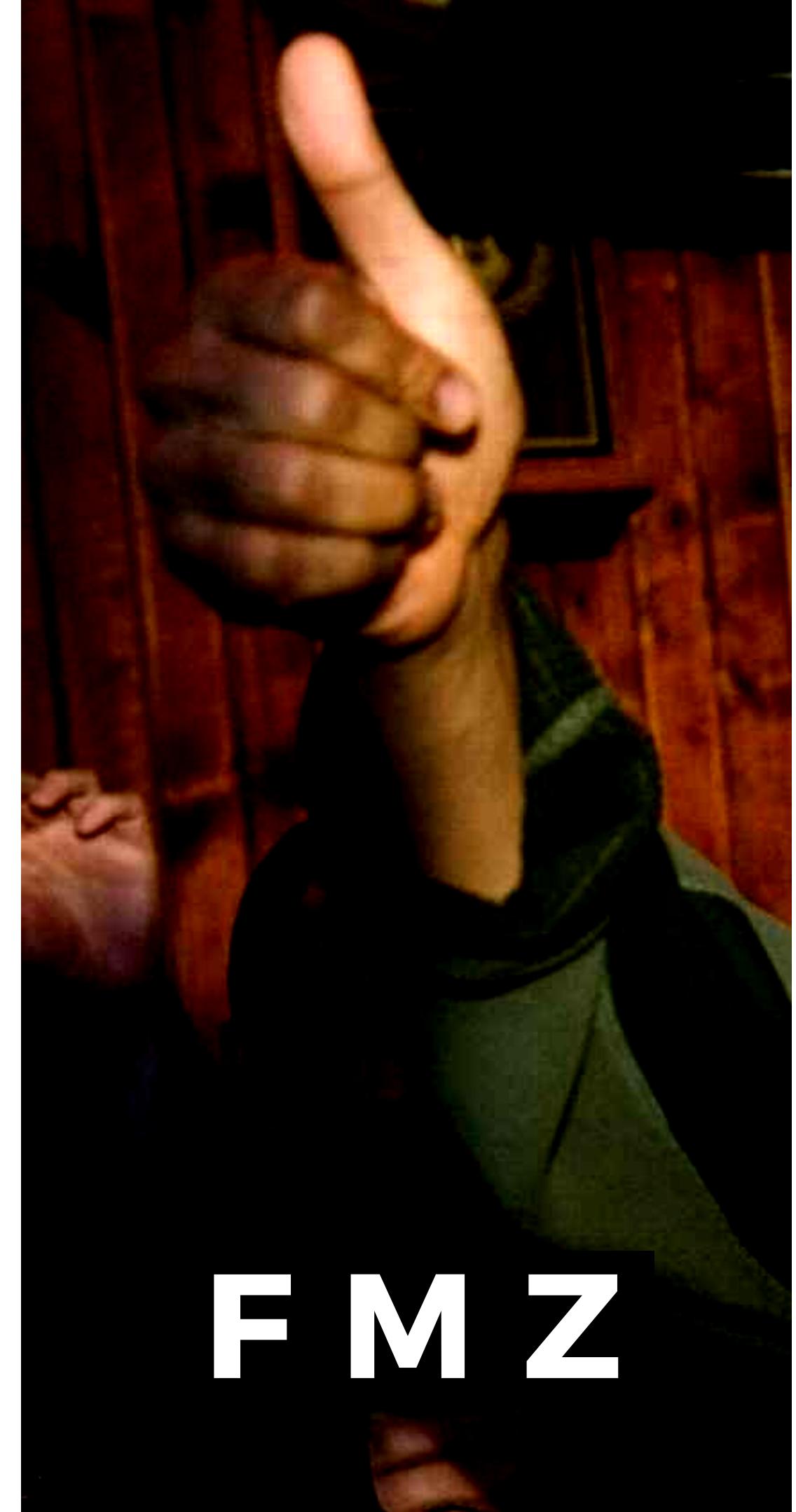
```
#include <ArduinoOTA.h>
void setup() {
    ArduinoOTA.begin();
}
void loop() {
    ArduinoOTA.handle();
}
```

MESH

```
WiFi.mode(WIFI_AP_STA);
--
#include <ESP8266WiFiMesh.h>
String handleReq(String req){}
ESP8266WiFiMesh node =
    ESP8266WiFiMesh(id, handleReq);
node.begin();
node.acceptRequest();
node.attemptScan(req);
```



ESSE NEGÓCIO DE
IOT TÁ PARECENDO
MAIS REALISTA
AGORA



F M Z

F M Z





PROTOCOLOS

BAIXO OVERHEAD
BAIXO CONSUMO
AUTENTICAÇÃO
AUTORIZAÇÃO
CRIPTOGRAFIA
LATÊNCIA



X M P P
H T T P
C o A P
M Q T T
O S C
B L Y N K
D M X / A r t - N e t

BLYNK

DRAG N DROP APP BUILDER

```
#include <BlynkSimpleEsp8266.h>

Blynk.config(BLYNK_AUTH);

BLYNK_WRITE(V0){
    myvar = param.toInt();
}

void timerHandler(){
    int v = analogRead(A0);
    Blynk.virtualWrite(2,v);
}

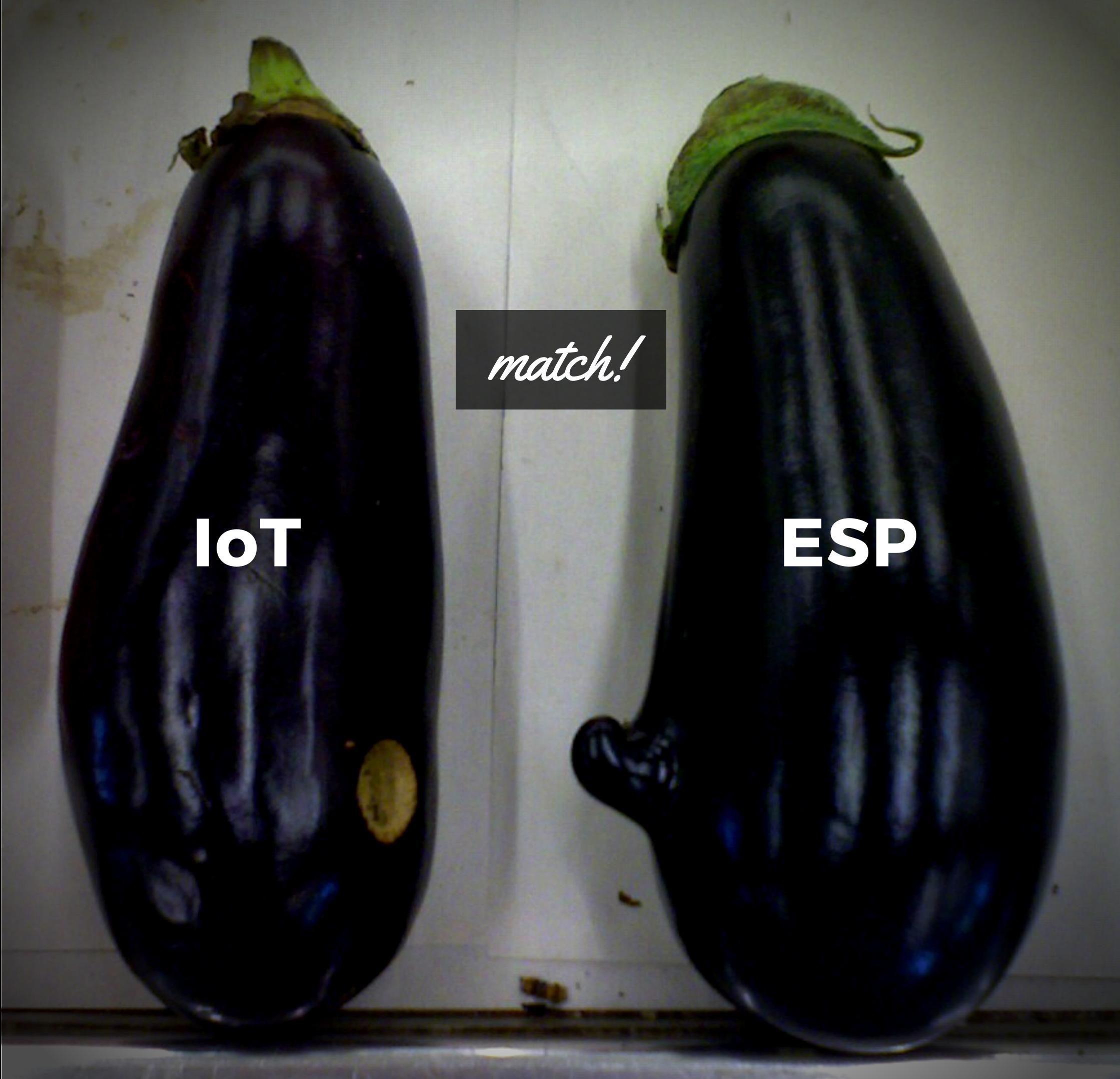
void loop(){ Blynk.run(); }
```

BRANDING | PUBLISHING



A photograph of a jazz band performing. In the foreground, a man wearing a fedora hat and a red jacket is playing a silver trumpet. Behind him, another man in a blue shirt is playing a saxophone. To the right, a man in a white shirt is playing a guitar. The background is blurred, showing more musicians and instruments.

JAZZ
TIME



IoT

ESP

match!

DICAS DE ÚLTIMA HORA



UTILIZE TIMERS



NÃO ESQUEÇA DO YIELD()



ADAFRUIT, SPARKFUN



CUIDADO COM A TENSÃO 3.3V

GAROA: O LUGAR MAIS



DA HORA DA CIDADE

“

**Não tenho nenhuma citação para
fazer, mas achei que este slide
ficaria muito legal na
apresentação.**

...

ODA, EDUARDO
AUTOR DE LIVRO NENHUM

