# SIMPLE IOT WORKSHOP

HTTPS://WWW.POCKETMAGIC.NET/SIMPLE-IOT/

Internet connected temperature sensor

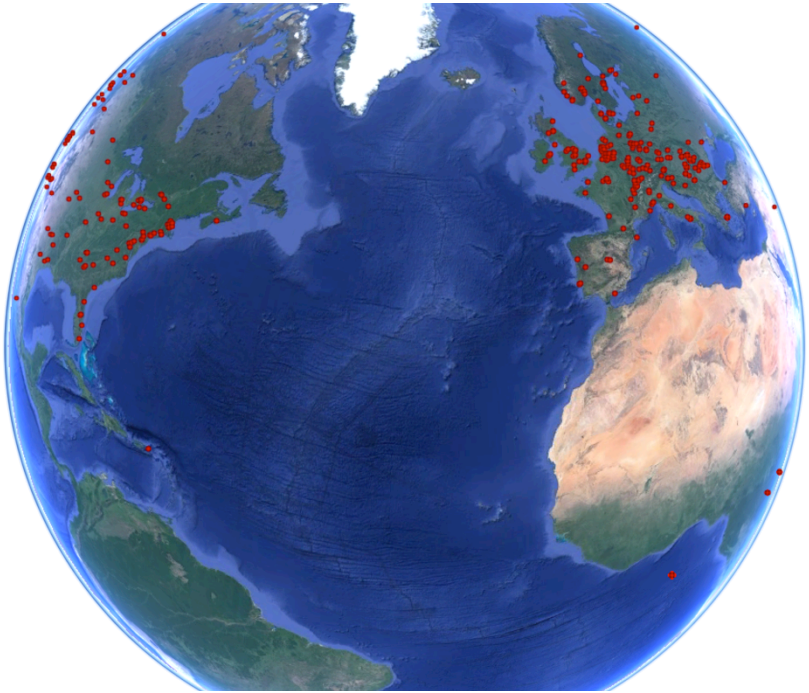
# About me

**Radu Motisan**

**uRADMonitor Founder**

uRADMonitor is a global network of IOT devices used for environmental monitoring. There are close to 800 units worldwide.

radhoo.tech@gmail.com

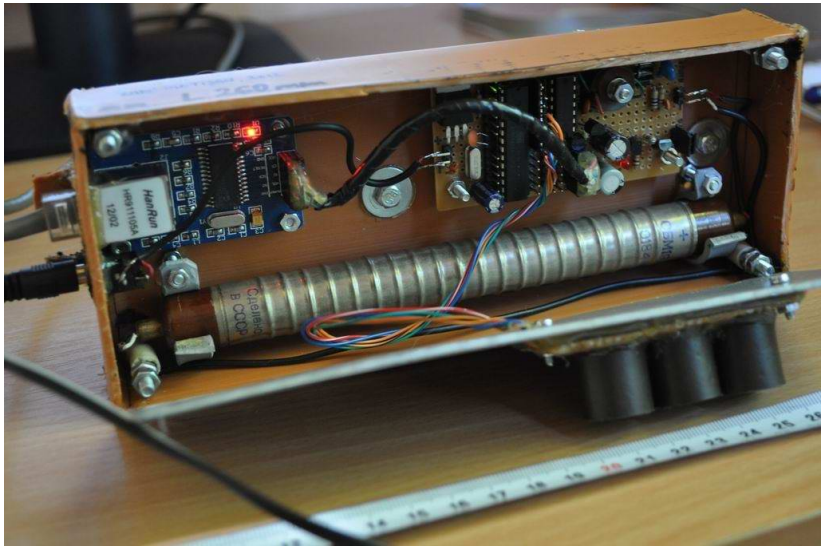


uRADMonitor units on the globe

# Introduction

IOT stands for Internet of Things and refers to small devices equipped with direct internet connectivity, without needing an external computer.

They are cheap and low power.



Early IOT Device based on en28j60

# Hands on IOT Workshop

Today we build an IOT device!

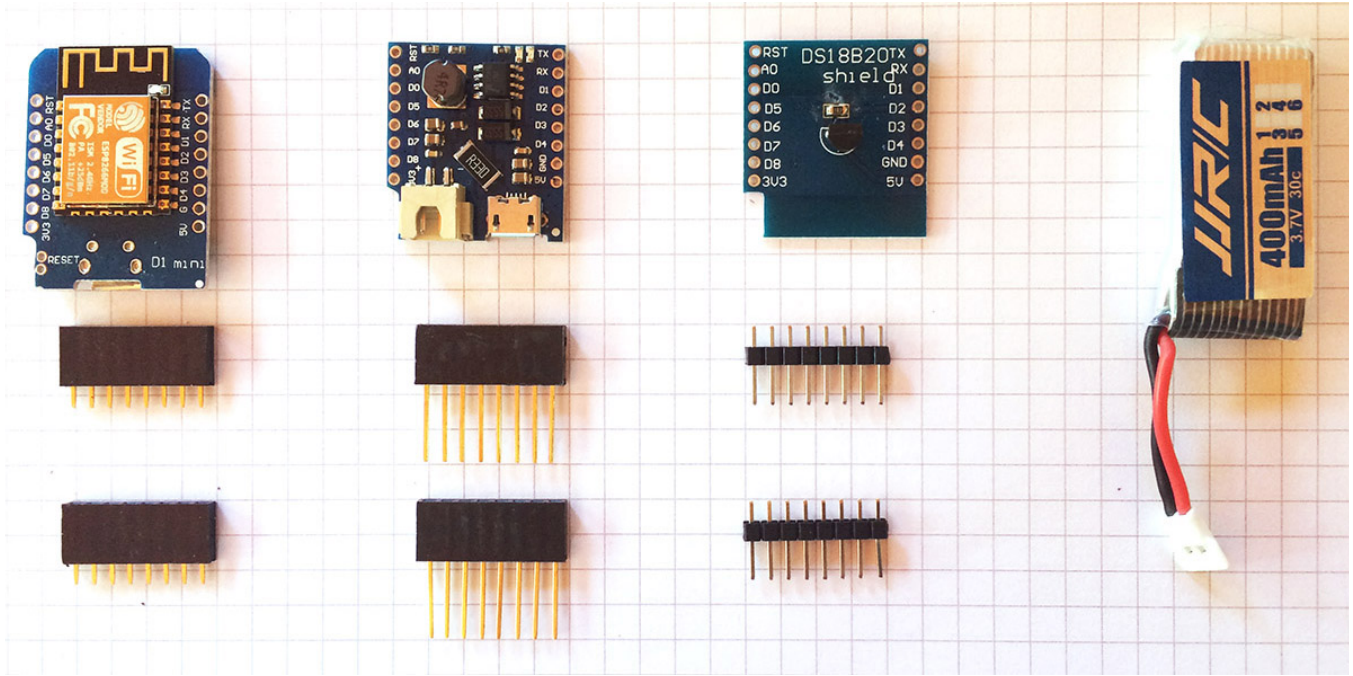
Requirements:

Simple IOT Kit

Soldering station

Computer

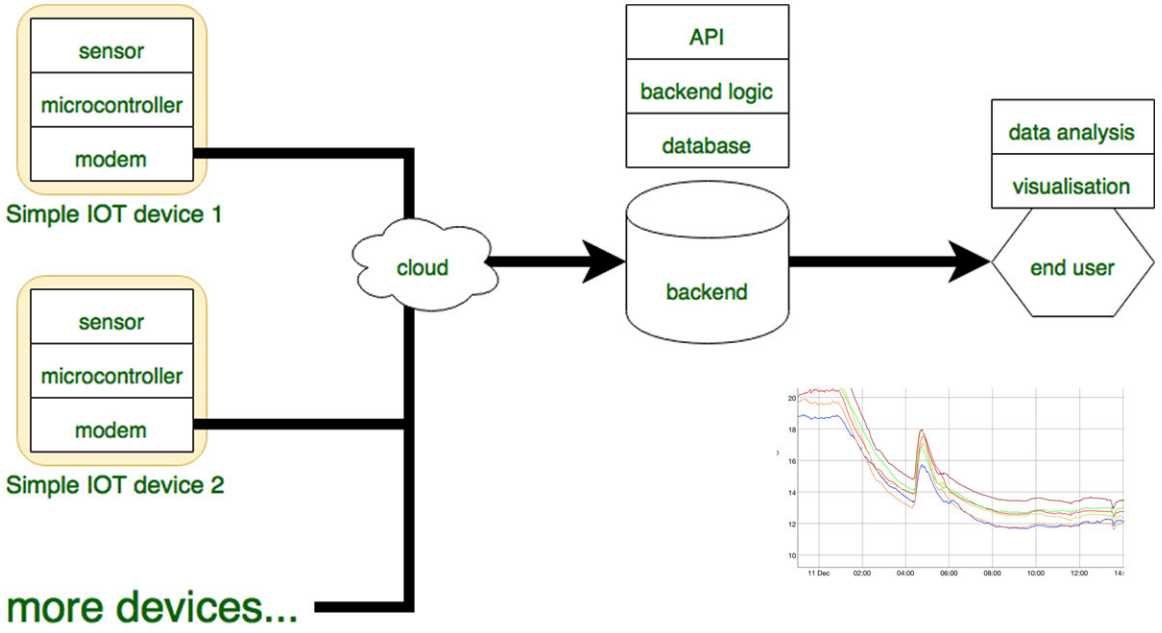
MicroUSB cable



# Simple IOT Architecture

IOT Device

Server



# Software requirements

Please install the following:

Arduino IDE

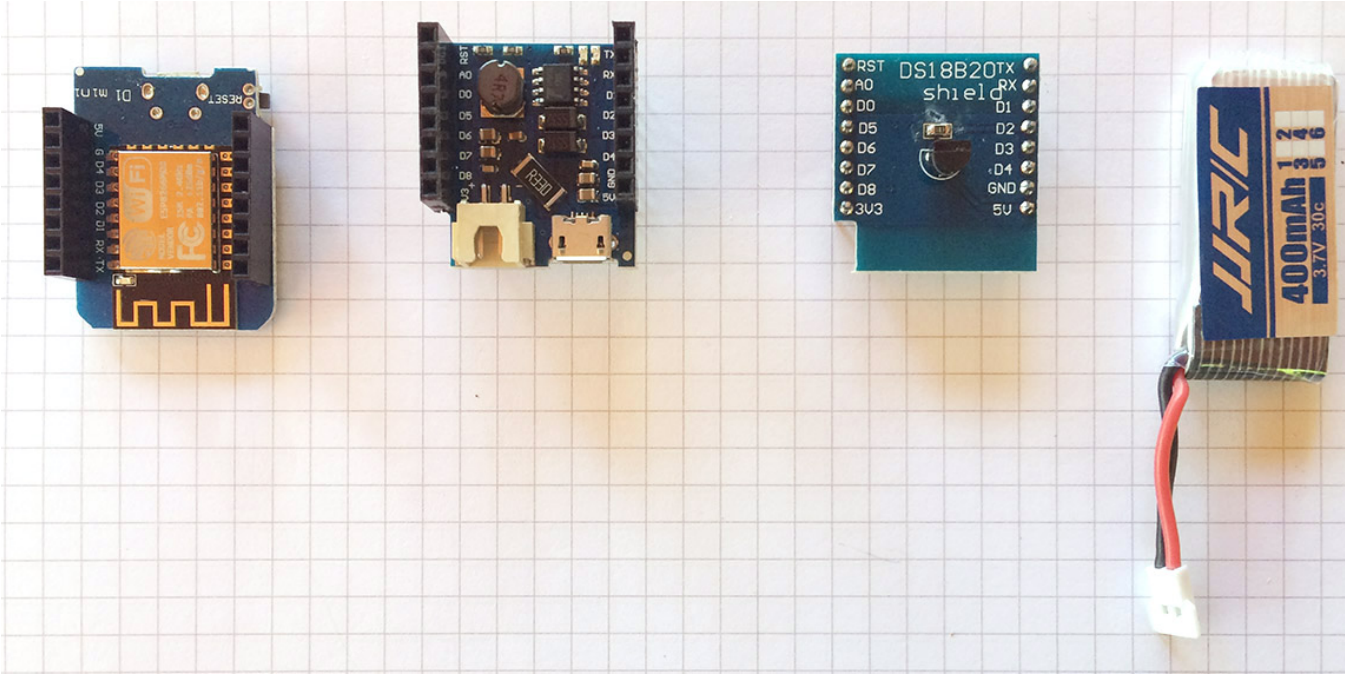
CH340 driver

Configure Arduino IDE for ESP8266.

- https://www.arduino.cc/en/Main/Software
- http://www.wch.cn/download/CH341SER_ZIP.html
- Additional boards Manager: http://arduino.esp8266.com/stable/package_esp8266com_index.json

# Assembling the hardware

Solder the headers so the modules can stack together with the battery shield at the middle and the temperature sensor at the top.



# Downloading the firmware

Download the firmware from Github.

Add your Wifi Router settings to the code (SSID + Key).

Add the user ID and the user Key.

- Download code: https://github.com/radhoo/SimpleIOT
- Create a user account on: https://www.uradmonitor.com/dashboard/

# Improvements

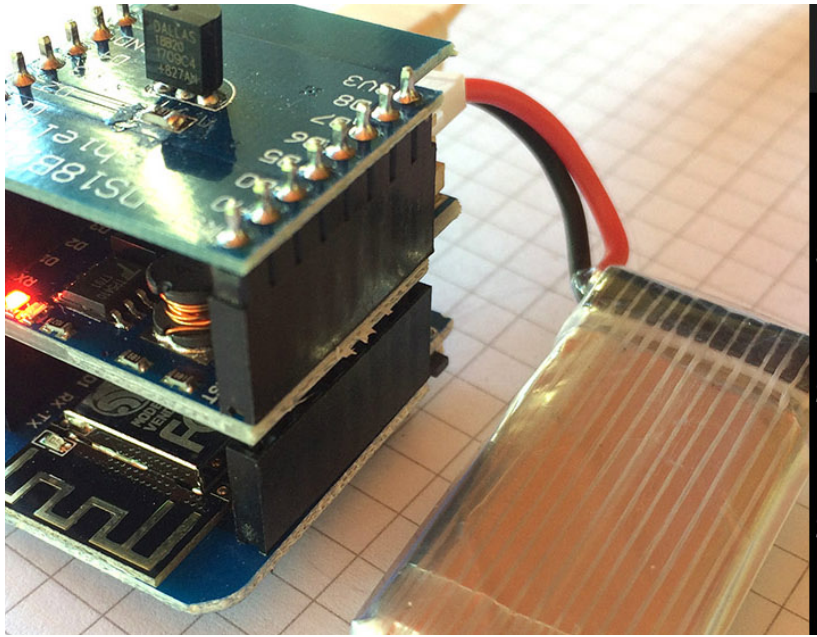
Know the code and try to improve it:

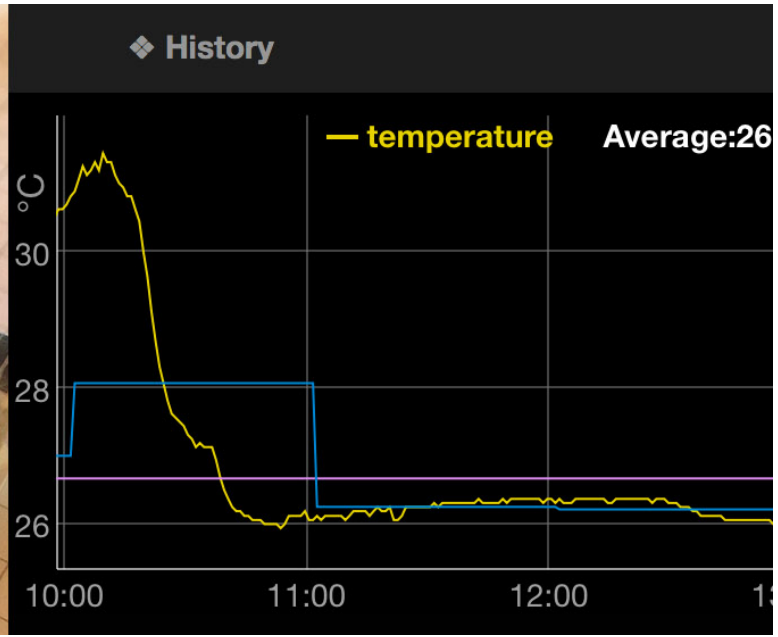
More sensors

Power saving

- The EXP Protocol is presented here: https://www.pocketmagic.net/simple-iot/
- ESP8266 deep sleep: ESP.deepSleep(50e6); // 50e6 is 50 seconds

# The results and data access



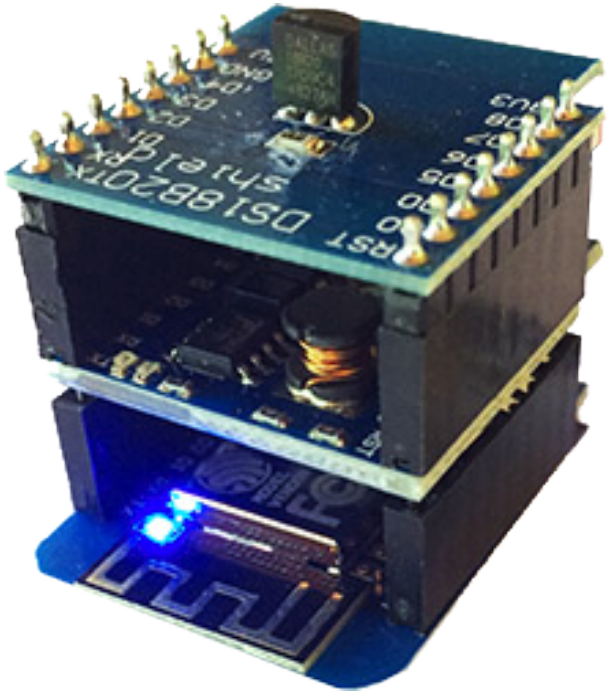



https://www.uradmonitor.com/?open=13XXXXXX

# Thanks for your time!

**Radu Motisan**

radhoo.tech@gmail.com



The Simple IOT Device stack