





ifgi

Institute for Geoinformatics
University of Münster

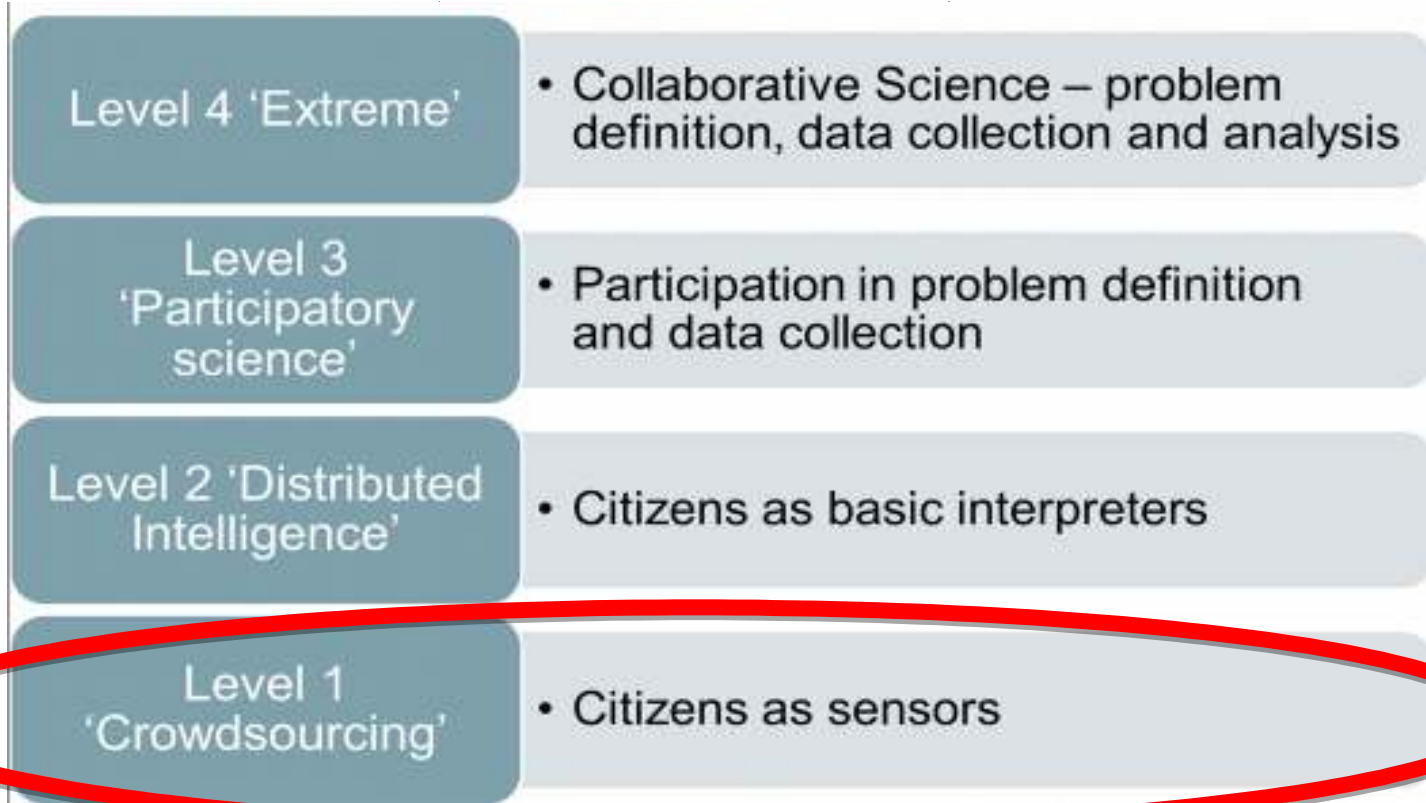
senseBox



...senseBox und openSenseMap:
Citizen Science
für Sensordaten

CITIZEN SCIENCE

M. Haklay
(2011)



Report Observations !!

Form 80-2
"R" 5/83

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATURAL HISTORY FIELD OBSERVATION

OBSERVATION:

Use this form

LOCATION:

DATE (Month, Day, Year)

TIME (a.m., p.m.)

WEATHER

Description, Behavior, Number, Sketch, Map, Etc. (use reverse if necessary)

Exercise 2

Storing the first data from the

Exercise description

The sensor device is a sensor that measures the temperature of a device. A sensor is a device that converts a physical quantity into a signal that can be processed by a computer.

In the exercise, you will use the sensor to measure the temperature of the sensor itself. The sensor is connected to the Arduino Uno and the data is stored in the EEPROM.

Before the temperature measurement and storage, the program must be initialized. In the first step, the sensor is initialized. In the second step, the sensor is connected to the Arduino Uno and the data is stored in the EEPROM.

Following the instructions in the exercise, you will understand the basic principles of working with sensors.

Components

Arduino Uno board, USB cable, breadboard, jumper wires, LCD 2 display

Schematic



Connect a variable resistor according to the picture. Don't forget to connect the "Vcc" and "GND" pins to the "5V" and "GND" pins of the Arduino Uno. The "A0" pin is connected to the "A0" pin of the Arduino Uno.

Connect the LCD according to the picture. Don't forget to connect the "Vcc" and "GND" pins to the "5V" and "GND" pins of the Arduino Uno. The "A0" pin is connected to the "A0" pin of the Arduino Uno.









senseBox 



Wo sind die
Daten?



IZW

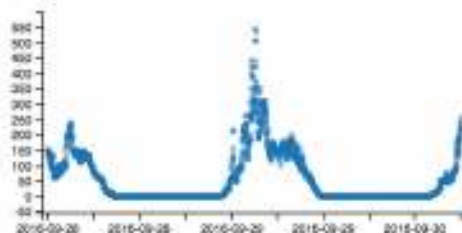
Gruppe: MakeLight

Hier stehen weitere Informationen zu dieser senseBox, der Besitzer dieser Station hat jedoch nichts hinterlegt.

UV-Intensität

255 $\mu\text{W}/\text{cm}^2$

vor einer Minute



Beleuchtungsstärke

12576 lx

vor einer Minute

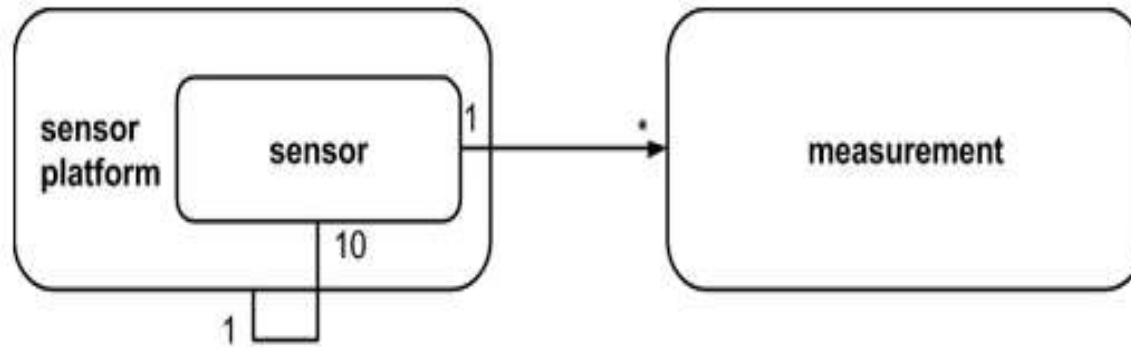
Luftdruck

1009.01 hPa

vor einer Minute

rel. Luftfeuchte

Datenmodell



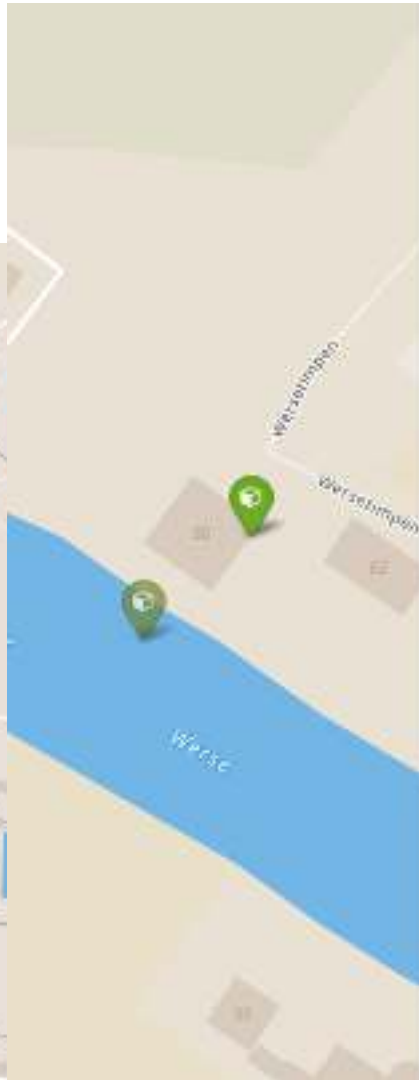
> 350 Boxen

> 150 Millionen Messungen

~ 400 Messungen pro Minute

open

OPEN...

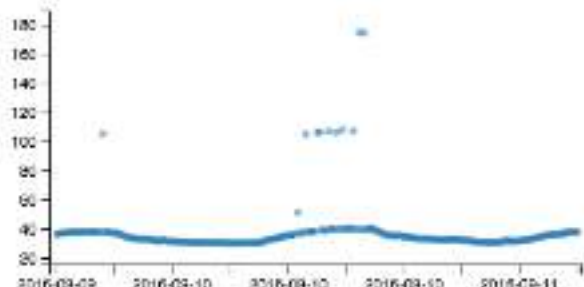


These values don't refer to official gauge zero. The values are based on the minimum value measured during development and are relative to that. Sensor is currently under development.

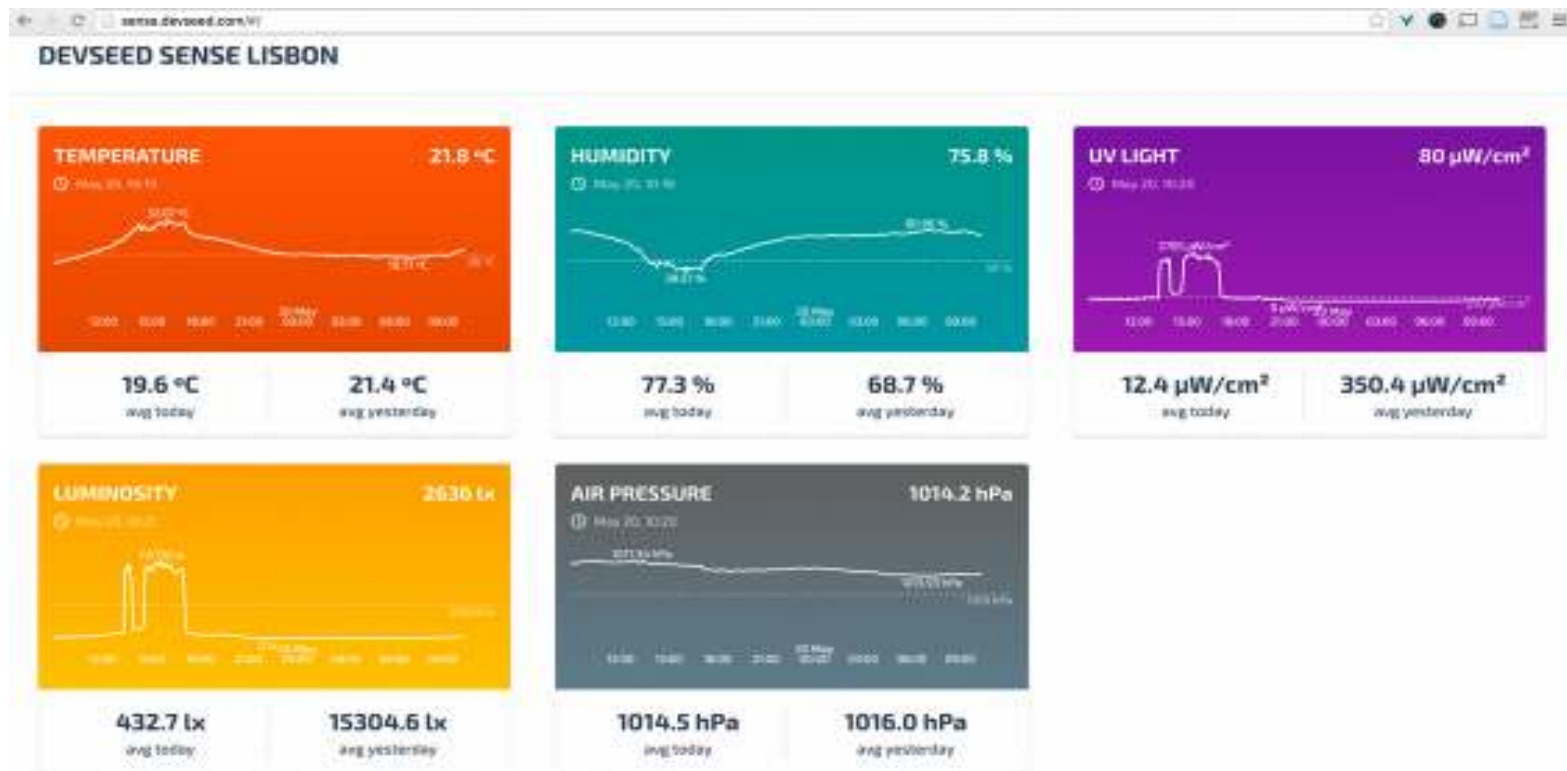
 Anderer

37.9 cm

vor 19 Tagen



OPEN...





1.1. Einleitung

1.2. Eigene Projekte beitragen

GETTING STARTED

2.1. Inhalt der Kiste

2.2. Arduino/Genuino

2.3. Installation der Software

2.4. Arduino IDE

GRUNDLAGEN

3.1. Digitale Signale

3.2. Analoge Signale

3.3. Variablen

3.4. if/else-Bedingung

3.5. Der serielle Monitor

3.6. Verwendung von Software-Biblioth...

3.7. Der serielle Datenbus (I2C)

3.8. Kommentare im Quelltext

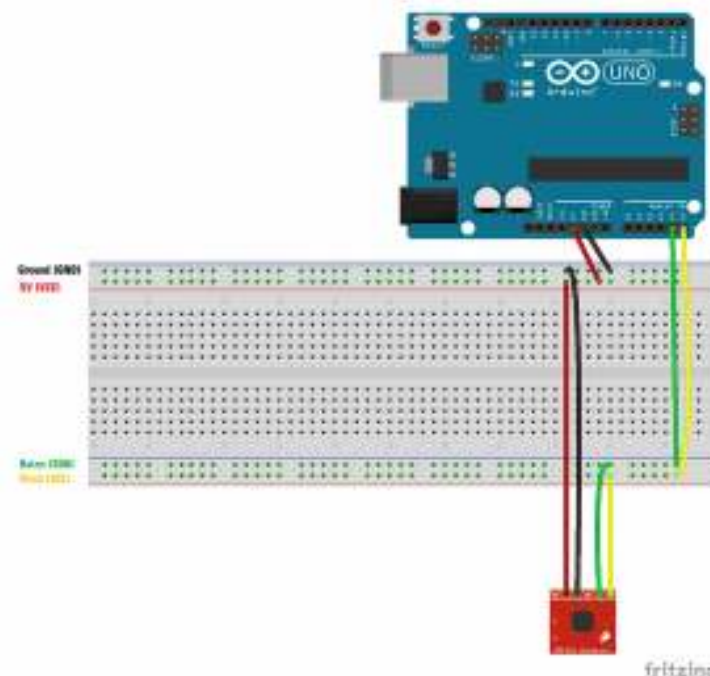
PROJEKTE

4.1. DIY-Umweltstation

4.1.1. Experimente mit Licht

UV-Lichtintensität wird in Mikrowatt je Quadratzentimeter ($\mu\text{W} / \text{cm}^2$) gemessen. Unser Sensor misst im Bereich von ca. 300 - 400 nm, nimmt also nur UV-A Strahlung auf (für genauere Angaben beachte das [Datenblatt](#)).

Aufbau

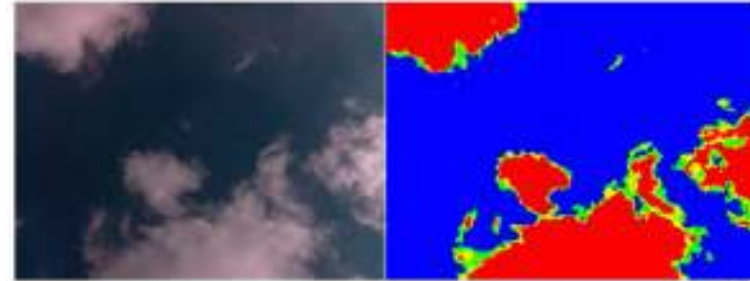
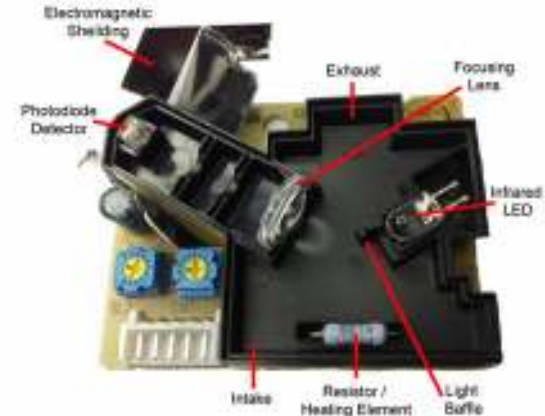


Schließe den Sensor an den [Arduino](#) an, wie es in der Grafik dargestellt ist.

Um über den I2C Bus auf den Sensor zugreifen zu können, müssen wir die Bibliothek `Wire.h` importieren und die Adresse des Sensors als Konstante definieren. Wir benötigen weitere Konstanten um

senseBox

- Gehäuse
- Luftqualität
- Wolkenabdeckung
- Wasser
- OER / Community
- UV-Messnetz Alpenraum



openSenseMap

- Cloud-Services
- Sicherheit
- Filter
- Statistische Analysetools
- Metadaten
- User Management
- Usability

Vielen Dank für Ihre Aufmerksamkeit

www.sensebox.de
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github.com/sensebox



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