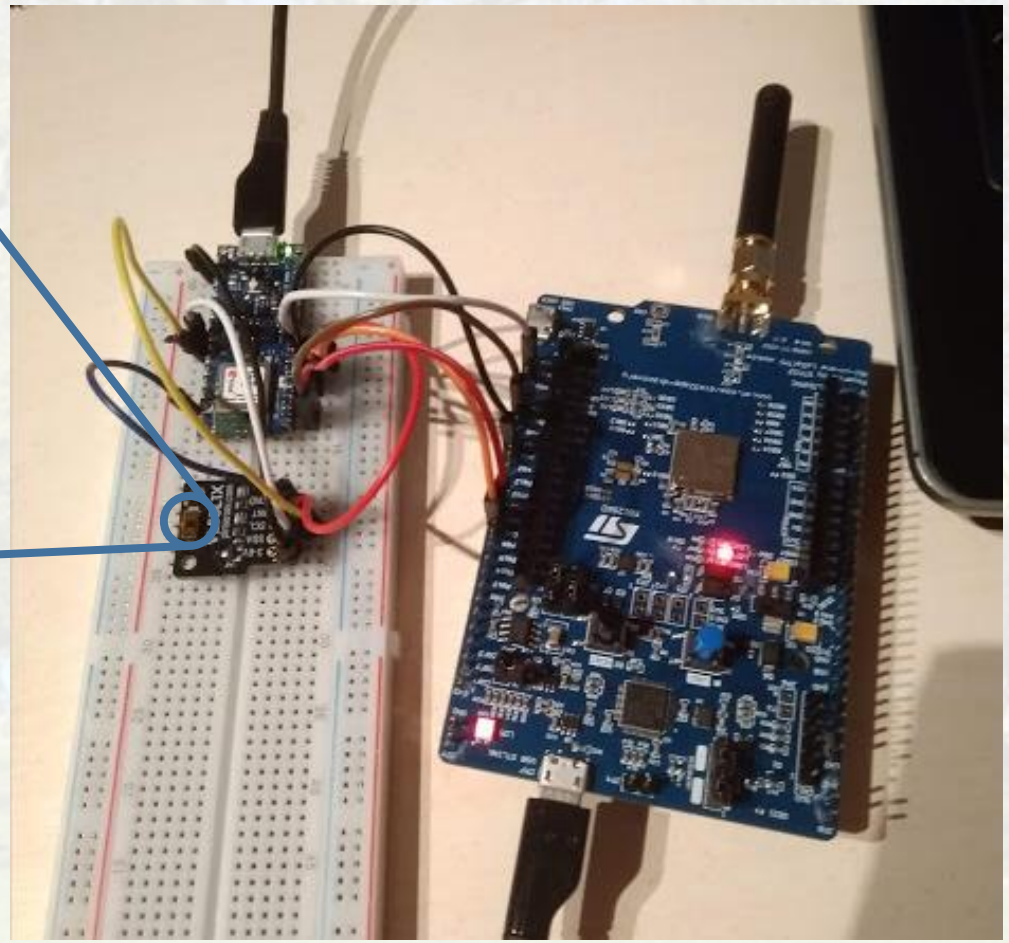
Awesome green spaces

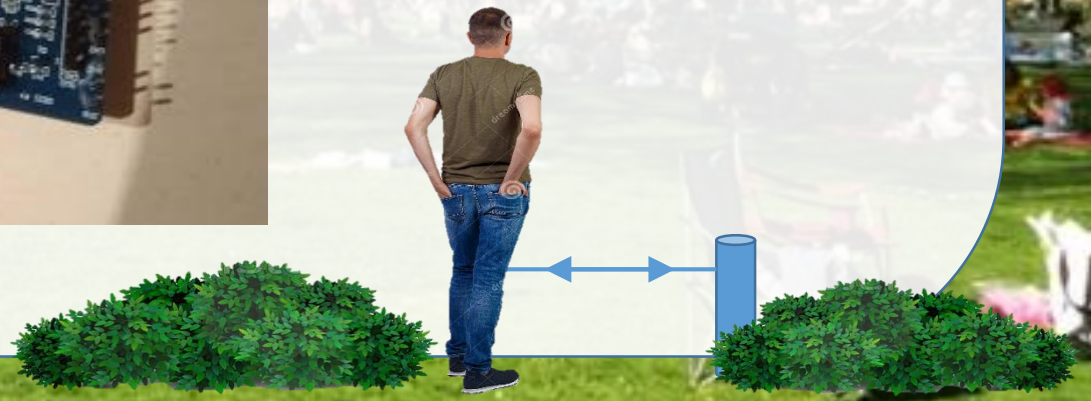
Agnieszka Noculak & Adam Pyka

Questions:

1) How many people visit green spaces?
2) Which available facilities people use?
3) Facilities maintenance
4) How weather affect our measurements?

How many people visit green spaces? → People counting





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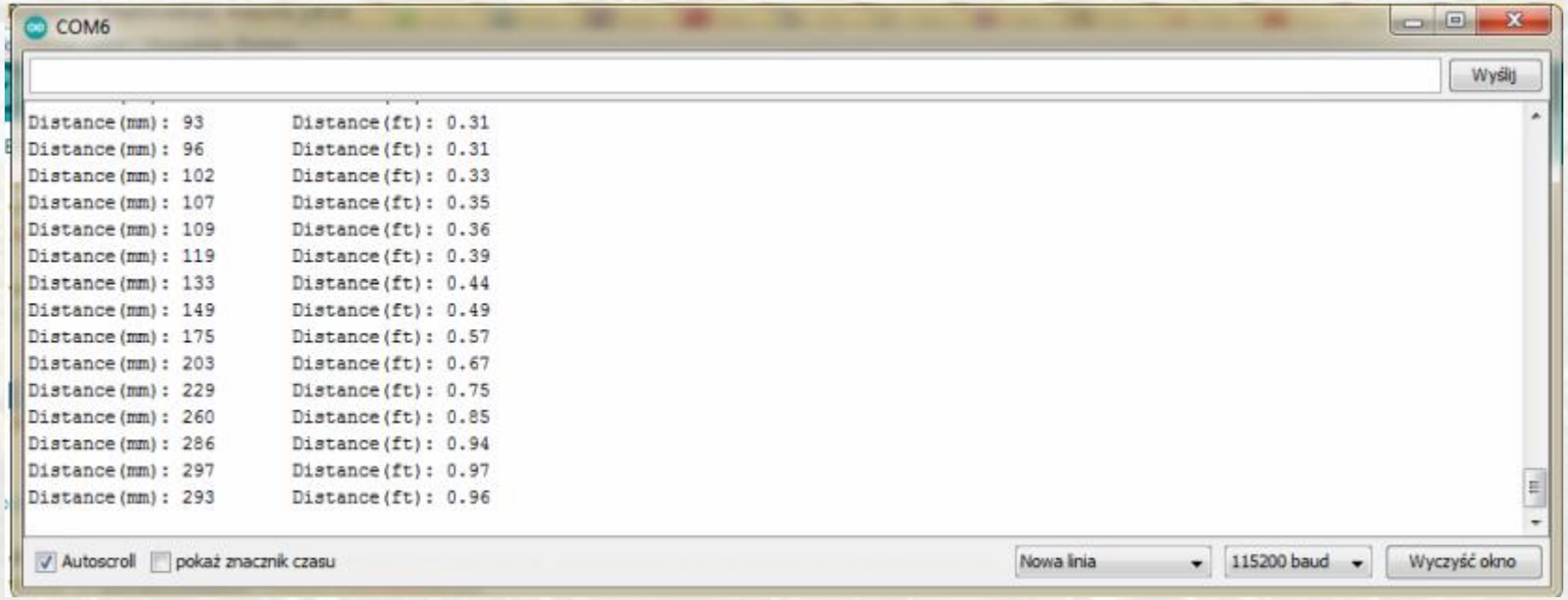
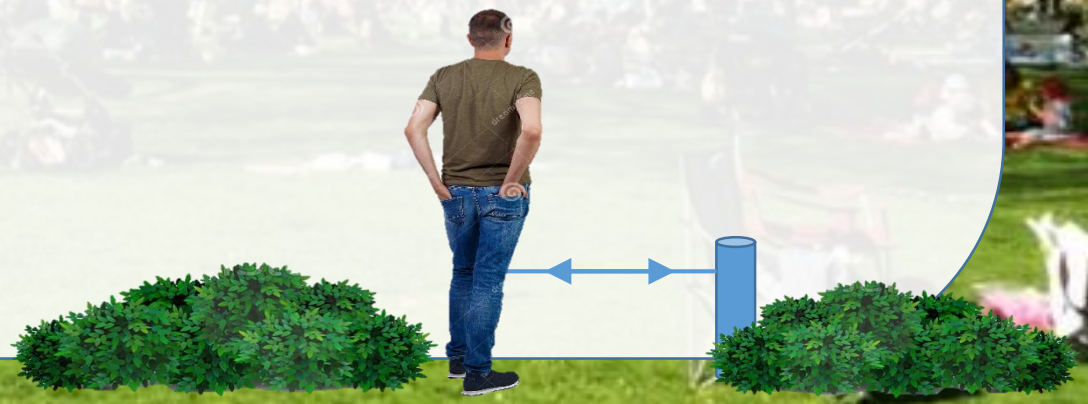
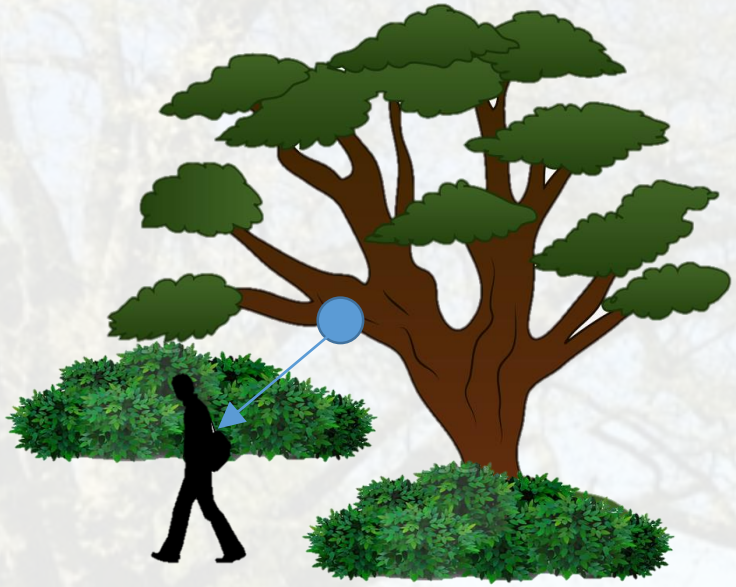




Determination of direction



Mobile App

- Current green spaces occupation
- Most popular green spaces

Facilities maintenance

Which available facilities people use?

… or why they don’t use them.

Dirty

In direct sun

Wrong direction

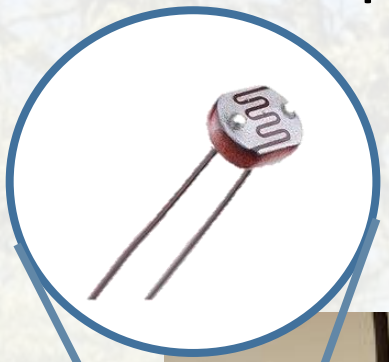
Which available facilities people use?

- Benches

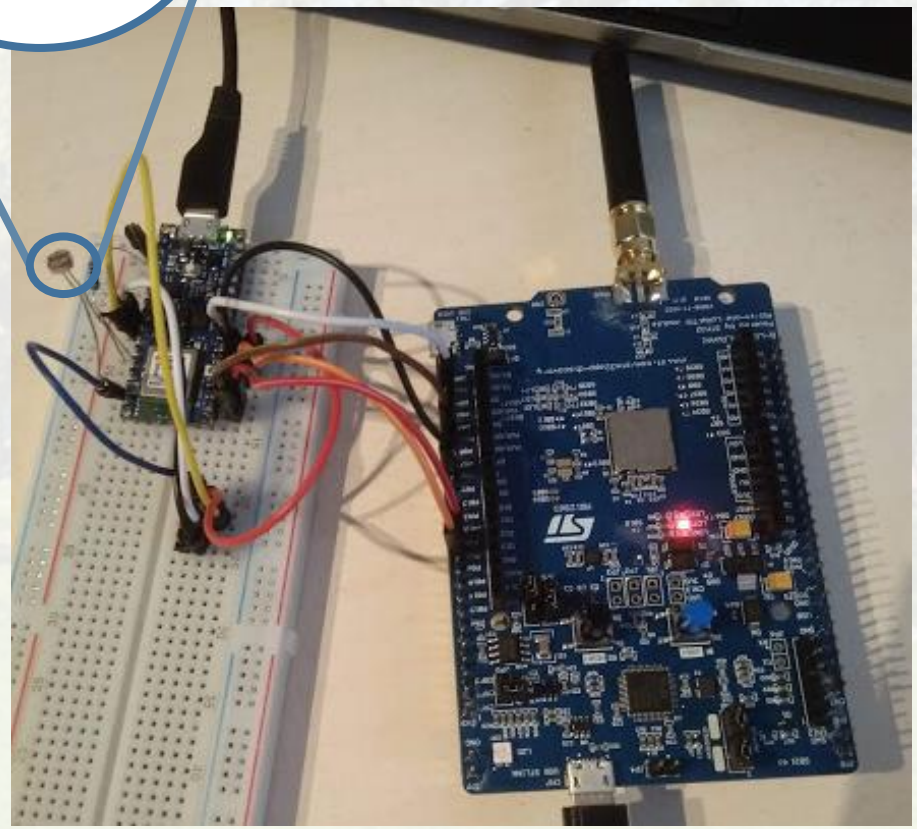
Empty bench

Bench occupied

Which available facilities people use?

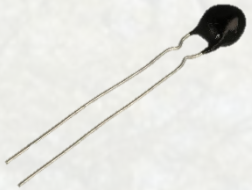


- Benches



Which avaliable facilities they use?

- Fire places / grill



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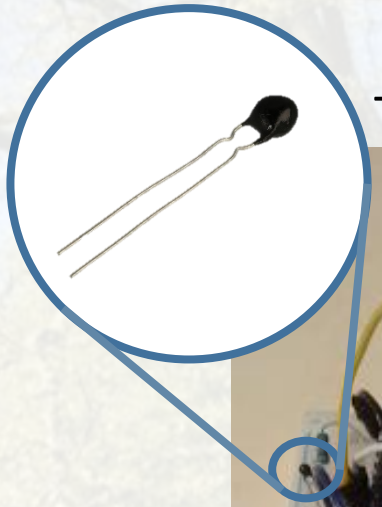
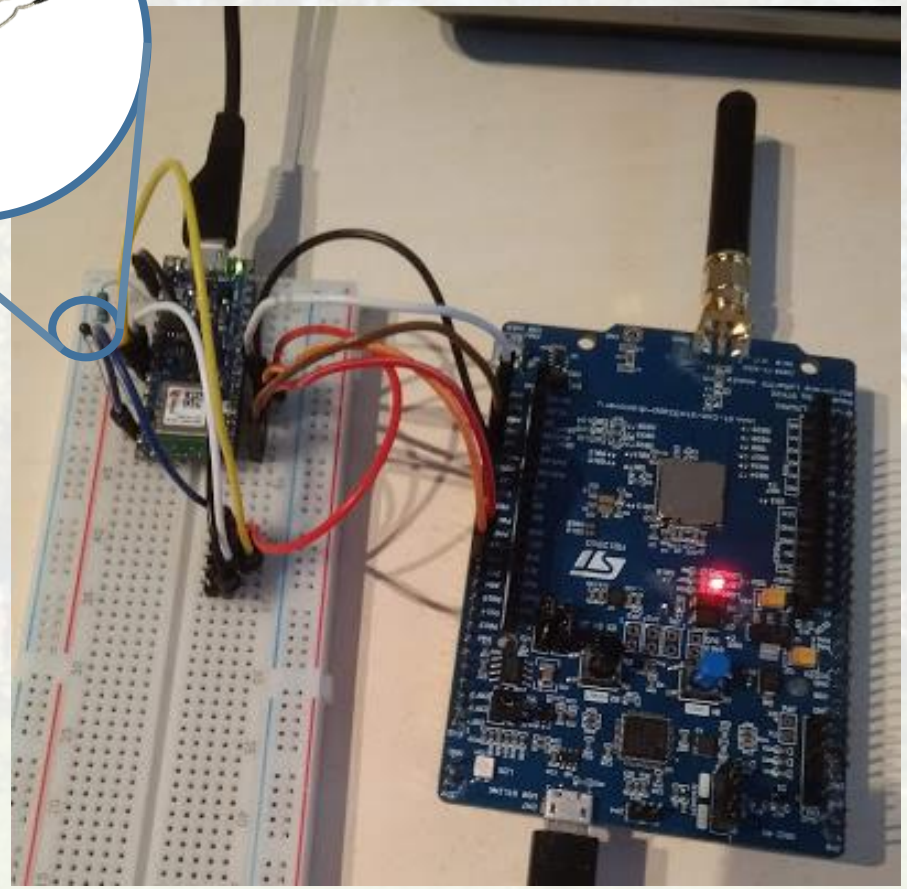


- Fire places / grill



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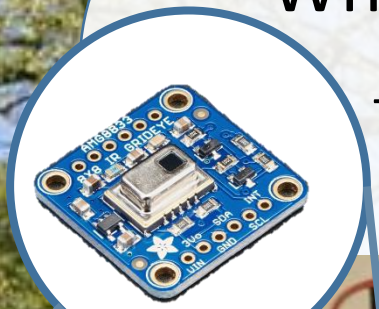

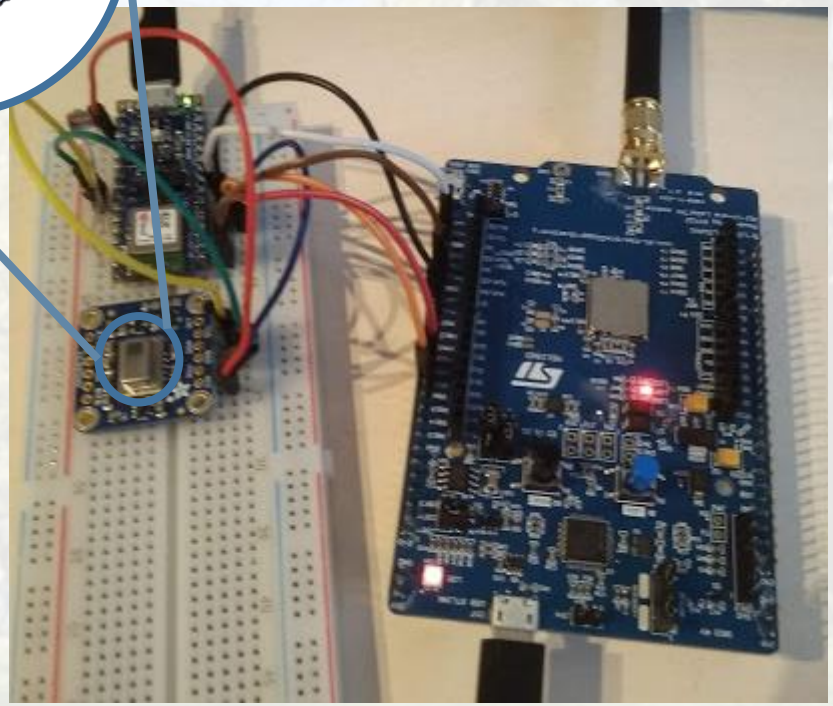

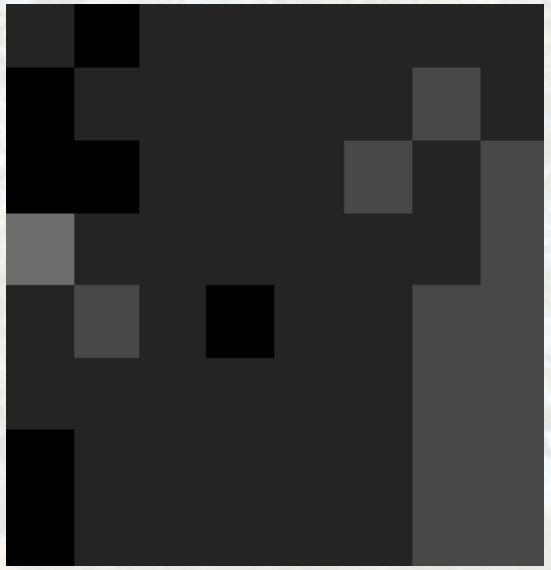

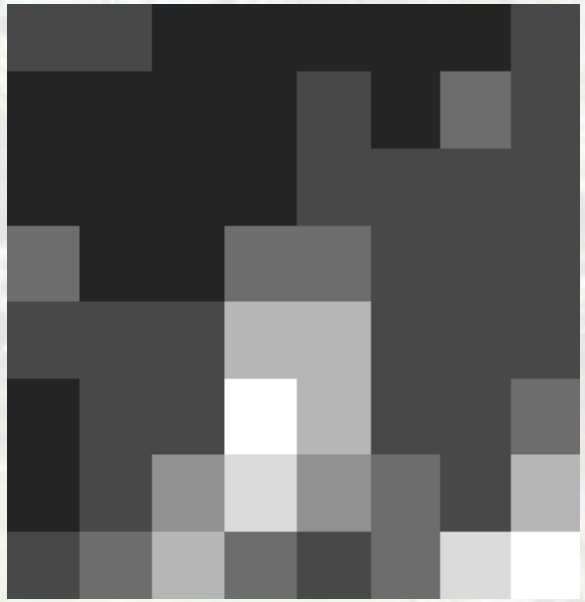

How weather affect our measurements?

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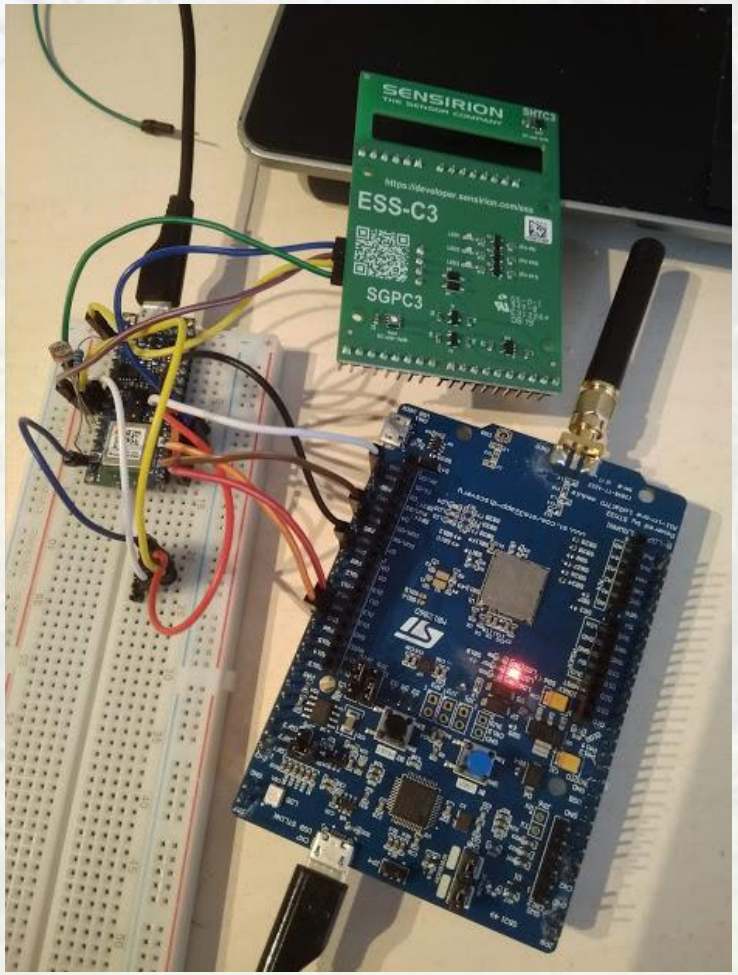


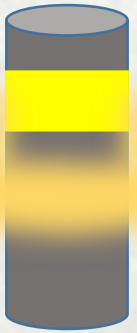

```
ess

// it's important to do this first to make sure sleep timing is
// correct. If the command succeeds, the local variables will
// be set to the values we just read; if it fails, they'll be -1
if (ess.measureIAQ() != 0) {
  Serial.print("Error while measuring IAQ: ");
  Serial.print(ess.getError());
  Serial.print("\n");
} else {
  tvoc = ess.getTVOC();
  eco2 = ess.getECO2(); // SGP30 only
}

// next, we'll trigger the humidity and temperature measurement
if (ess.measureRHT() != 0) {
  Serial.print("Error while measuring RHT: ");
  Serial.print(ess.getError());
  Serial.print("\n");
} else {
  temp = ess.getTemperature();
  rh = ess.getHumidity();
}

// finally, let's print those to the serial console
Serial.print(temp);
Serial.print(" ");
Serial.print(rh);
Serial.print(" ");
Serial.print(tvoc);
Serial.print(" ");
```

```
COM6

29.73 27.71 0.00
29.59 27.84 3.00
29.52 28.03 0.00
29.39 28.16 0.00
29.32 28.34 2.00
29.23 28.46 0.00
29.13 28.52 0.00
29.04 28.63 7.00
28.90 32.05 23.00
28.84 33.36 19.00
28.82 33.36 17.00
28.69 32.07 12.00
28.62 31.12 3.00
28.54 30.49 0.00
28.47 30.20 0.00

Autoscroll  pokaż znacznik czasu
```

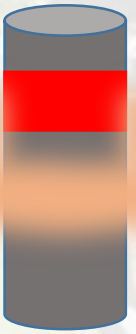
UV level

LOW

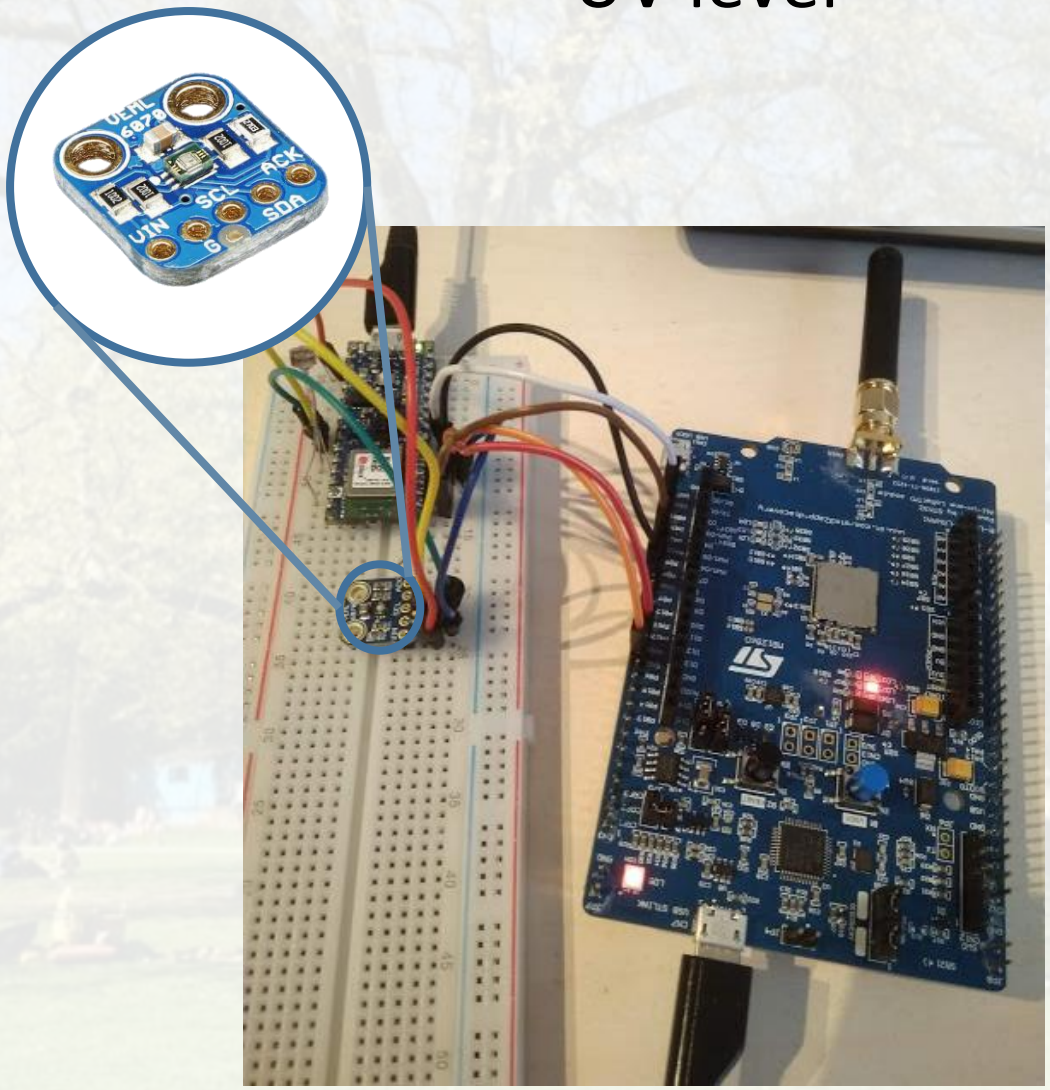
MEDIUM

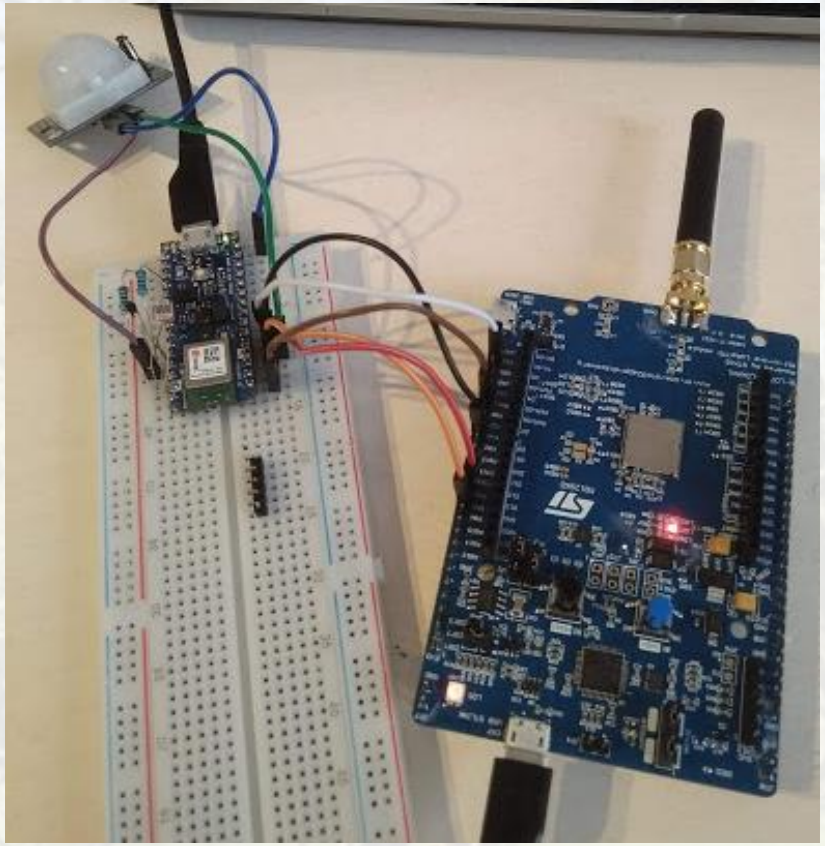


HIGH



UV level



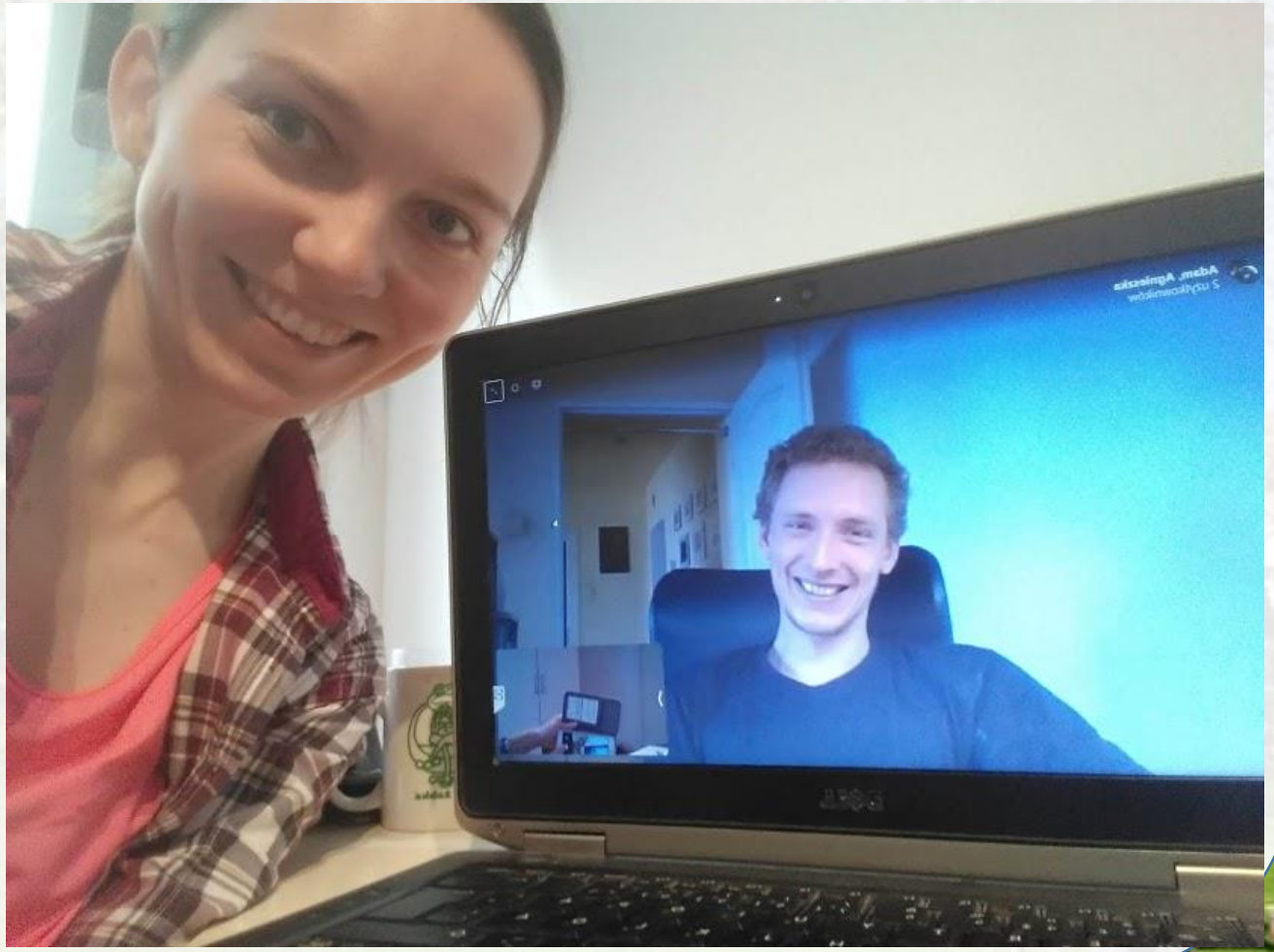


Communication frame:

Bench occupation: 1 – occupied 0 – not occupied	Temperature: 0 – temp > 0 1 – temp < 0	Temp mantissa	Temp characteristic
e.g. 1	1	2	50

Occupied bench at -2.50C


Europe
Agnieszka
Adam
Iceland
Norwegian Sea
Barents Sea
Norway
Sweden
Finland
Russia
Estonia
Denmark
Belarus
Kazakhstan
Germany
Poland
Ukraine
France
Bay of Biscay
Austria
Hungary
Romania
Slovakia
Czech Republic
Spain
Portugal
Italy
Serbia
Bulgaria
Black Sea
Georgia
Turkey
Iran
Greece
Syria
Iraq
Mediterranean Sea
Morocco
Algeria
Tunisia
Malta
Caspian Sea



ALL OVER THE WORLD


Thank you for attention