Motifit

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Which one do you choose?

VS

Our goal

- Make students and teachers more **aware of their behavior**
- Increase their **motivation** to improve their own health

How?

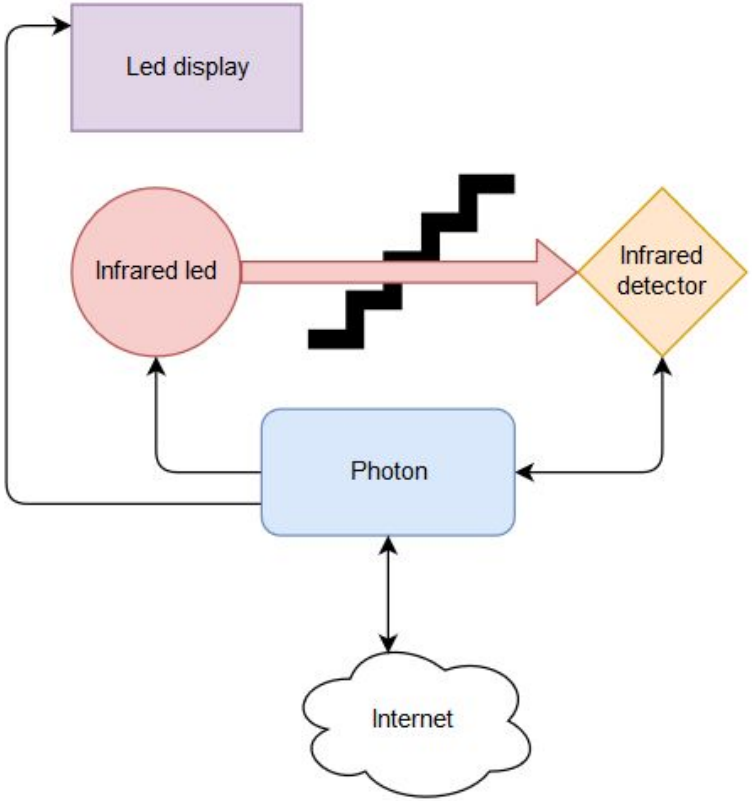
- **Show** the amount of people that have taken the stairs during the week
- Set and show **goals** for weeks
- Show a comparison between different buildings and departments to improve **competition**

Like biking

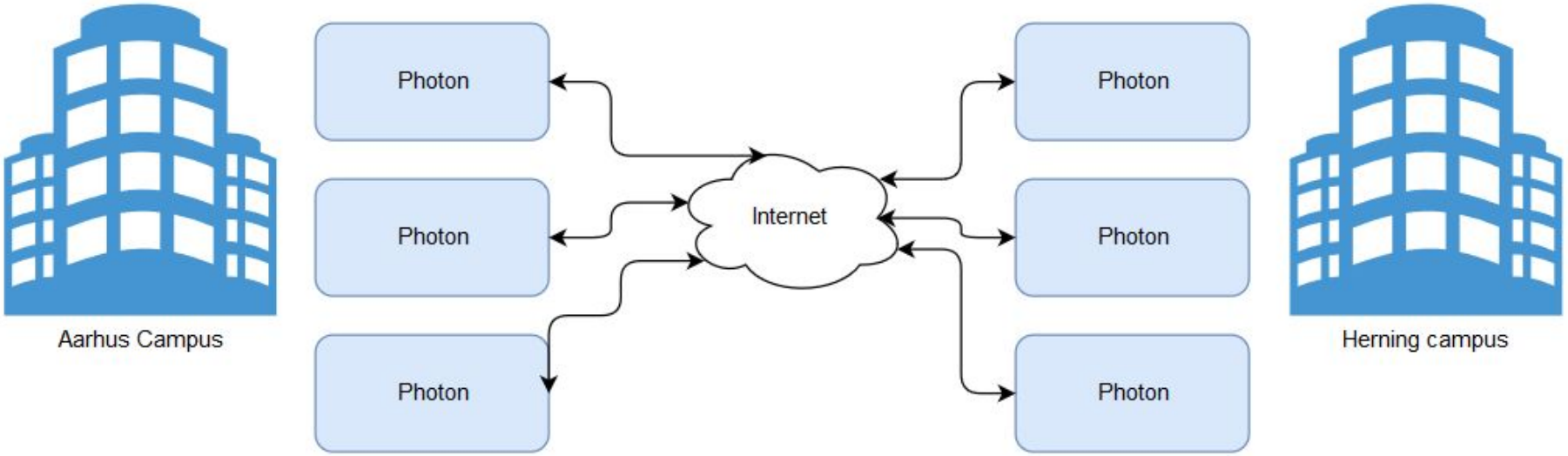
Aarhus Cykelby
Cyklister i dag
2287
18:46
Cyklister i år
1.000.000
900.000
800.000
700.000
600.000
500.000
400.000
300.000
200.000
100.000

Project design

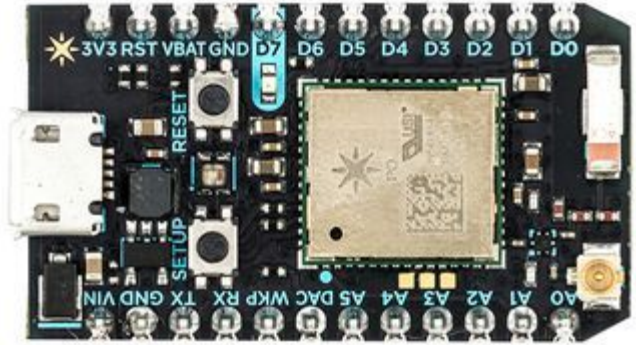
Concept


Led display
Infrared led
Infrared detector
Photon
Internet

Vision for motifit

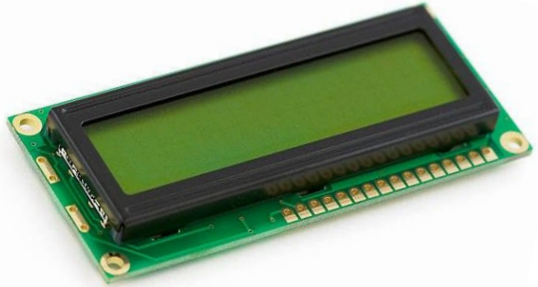


Hardware



Particle Photon

Infrared light and detector



Led display

Implementation

Requirements

Photon:

- Needs to upload data
- Needs to download data from other locations
- Connection does not need to be consistent

Led display:

- Can run on a schedule (not always on)
- Should give the user information a simple way that can be understood in a second.

Infrared sensor:

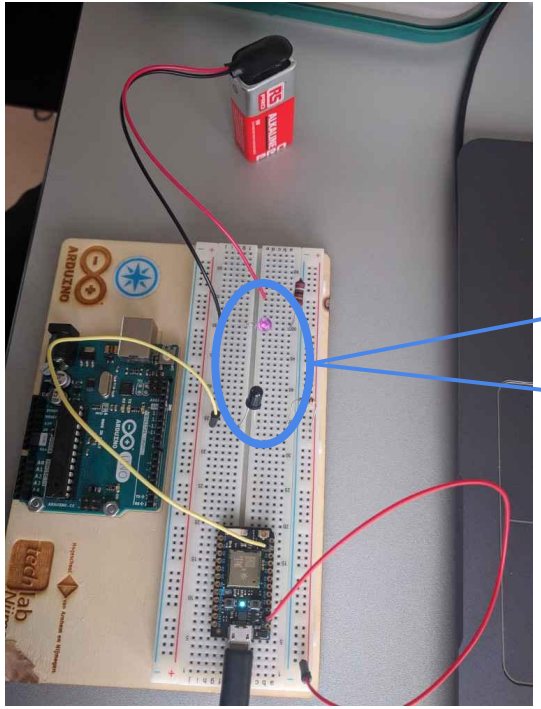
- Can detect an infrared light across a few meters
- Can detect when this is blocked for a 0.1 seconds
- Can filter out the sunlight

First infrared test

Problems encountered:

- Infrared led was not working
  - The power from the photon was not strong enough
  - A seperate battery would fix this.
- Detecting the infrared
  - The infrared light only shows light looking straight at it.
- Sunlight interferes with the detector
  - Use a duty cycle to detect that specific pattern
  - Change the detector to filter out the constant sunlight

First infrared test



detecting	285	European_swallow	10/22/18 at 3:02:33 pm
detecting	286	European_swallow	10/22/18 at 3:02:29 pm
detecting	333	European_swallow	10/22/18 at 3:02:27 pm
detecting	287	European_swallow	10/22/18 at 3:02:21 pm
detecting	348	European_swallow	10/22/18 at 3:02:17 pm
detecting	337	European_swallow	10/22/18 at 3:02:13 pm
detecting	344	European_swallow	10/22/18 at 3:02:09 pm
detecting	292	European_swallow	10/22/18 at 3:02:05 pm

to take the stairs!

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