

Smart Street Light

Members

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Background and idea

Project background and idea is based on how to make smart street lights that would function as an energy saver, in this case to reduce and increase brightness in the lights. We want to place the lights on narrow roads and small villages, there is no lighting. The main point of this project is to make it easier for every district in the municipality to have access to street lighting even in small villages. The main point of our project's idea is that we want to reduce the cost and usage of electricity.

Bill of Materials

- Pycom lopy-4
- LoraWAN antennas
- Photoresistor
- Pir sensor
- LED
- Wire
- Battery or powerbanks

General requirements

The brightness must be changed in real time, this means that the light will decrease or increase due to the movement of objects. By controlling the brightness, electricity can be saved.

Build a prototype of smart street light so that the movement of objects can be detected, the lamp is dimmed when there is no movement.

Data from the brightness is collected and sent to a serve for later analysis

Maybe detect the broken lamp and sent this information to the serve

Design the box so that the sensor and other devices can sit on street light

Time schedule

Week 50

- Get different sensors working
- Start coding
- Start testing

Week 51

- Getting started with a prototype
- Connect components
- Start coding
- Start testing

Week 52

- Connect components to MQTT
- Get LoraWAN working
- Start working on a report

Week 1

- Fix eventual problems
- Finish writing the report

Week 2

- Prepare for presentation

Grade ambition

The ambition in the group is to aim for higher grades such as from C to A.