

Automatic lights

Background:

Smart homes are rapidly increasing, and smart lighting is a big part of it. However, most lighting is based on what the user herself prefers and does not consider the brightness of the outdoors. A smart lighting system could detect the brightness of the outdoors and adjust the lights accordingly to save energy, especially in office buildings. For example, if it's very bright outside the lights in the office could decrease. This would potentially aid energy saving and improve the working environment.

Description and objective:

- Design a system which can detect the brightness in a room caused by the outdoors (and not from the controlled indoor lamps), and control the lights inside based on that.
- Interface for the user to see and understand why the system adjust as it does.
- Interface that includes energy saving calculations (lights on 50% versus 100% for example).
- Compare the possible energy savings from the light with the energy usage of the system.

