

Adiel-Shaquille Batson (adiel001) - Public Page

This public page *user:adiel001.txt*, as stated by its name, **can be read by anyone but only you can edit it** (or a superuser)...

- You can introduce yourself, add links to your contributions in this wiki, tell a story or present your other works

W

- Think about [netiquette](#) 😊

Limitations:

- You shouldn't create any other page in that namespace *user:adiel001*
- Only a superuser can add a picture

Building Optimization

A. Batson (28067), A. Akuri (29630), G. Ciobanu (29427)

(AMC 2022 Project can be found here [Building Optimization](#) . Until the page is available, edits will be made here.)

1.0 Introduction

As the urgency to mitigate and combat climate change grows, more and more solutions are required to foster a more sustainable world. On the radar for these solutions, energy conservation and consumption reduction techniques comprise a significant measure in realizing greater sustainability in home & industry (Mahiri et al. 2022). However, one of the greatest limitations in realizing these developments is human contingent, for example forgetting to turn/off lights and heating. This project targets energy use optimization by smart control of lights and heating use in prototype designed to simplify a building.

By utilization of a microcontroller, a relay and two sensors to record, interpret values and automatically perform specific actions in order to minimize wastage of energy.

2.0 Materials & Method

2.1 Materials

- LDR Photoresistor
- DHT11 Temperature Sensor
- SPDT Relay
- ESP32 Connection & MQTT

= Software =

- Node-Red
- InfluxDB
- Grafana

3.0 Results

4.0 Discussion

5.0 References

Mahiri, F., Najoua, A., & Ben Souda, S. (2022). 5G-Enabled IIoT Framework Architecture Towards Sustainable Smart Manufacturing. In International Journal of Online & Biomedical Engineering; 2022, Vol (Bd. 16, Nummer 4, S. 4-20). <https://doi.org/10.3991/ijoe.v18i04.27753>

From:

<https://student-wiki.eolab.de/> - **HSRW EOLab Students Wiki**

Permanent link:

<https://student-wiki.eolab.de/doku.php?id=user:adiel001&rev=1656497052>

Last update: **2023/01/05 14:38**

