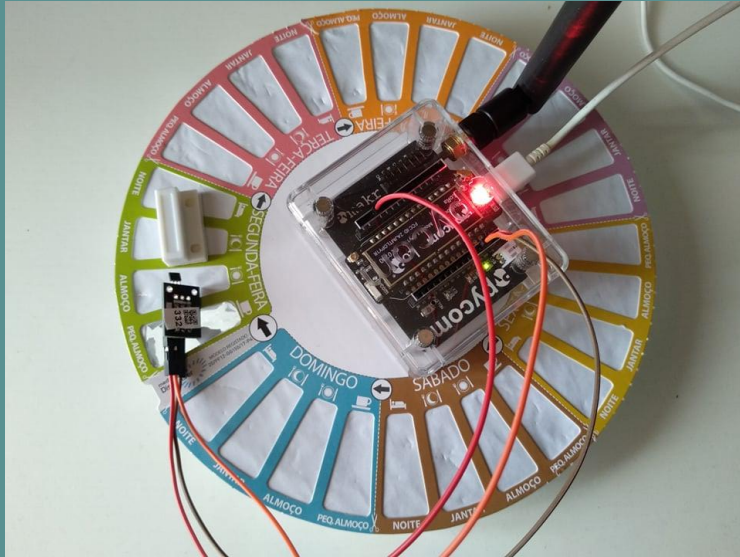


Dispenser Pills



Dispenser Pills - Product

Its a product whose goal is to help elderly people and people with memory problems (p.e Alzheimer) to correctly take the diverse medication through the day, without messing up the order forgetting to take them.





Dispenser Pills - Features



Warn the person when its time to medicate



Easy dosage configuration

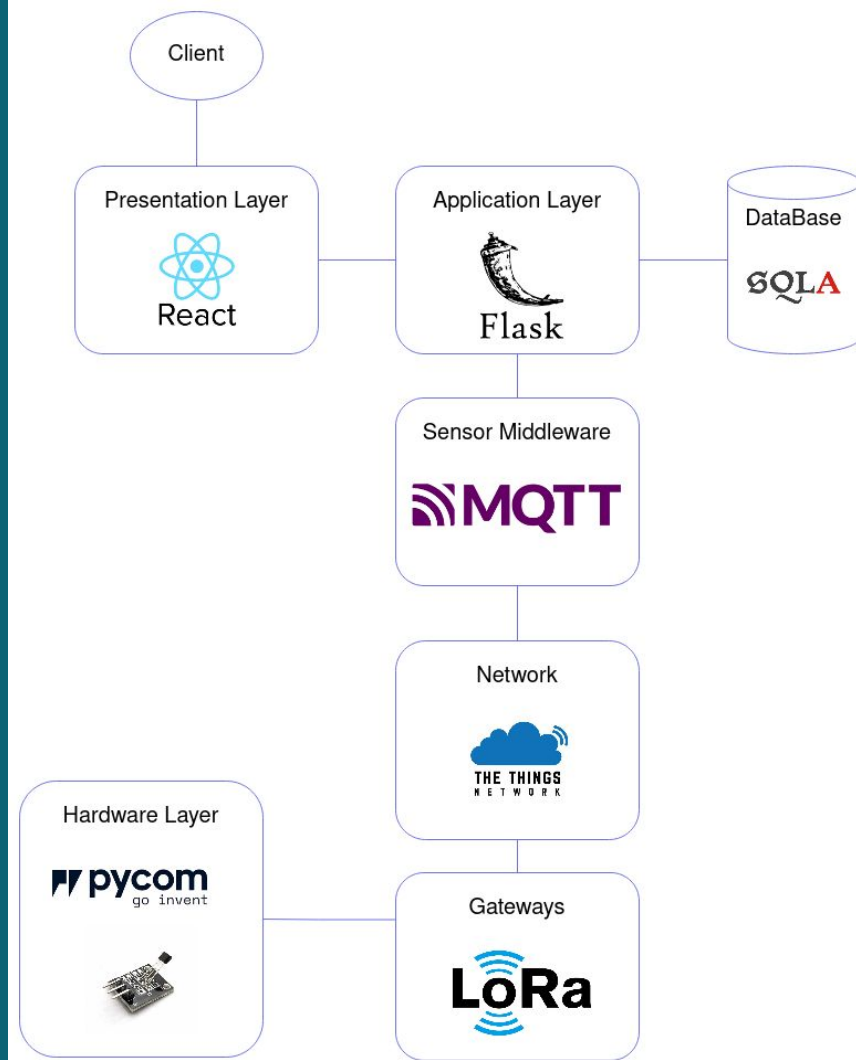


Ability of tracking by family/doctor

Indication of the slot with the next dosage of pills

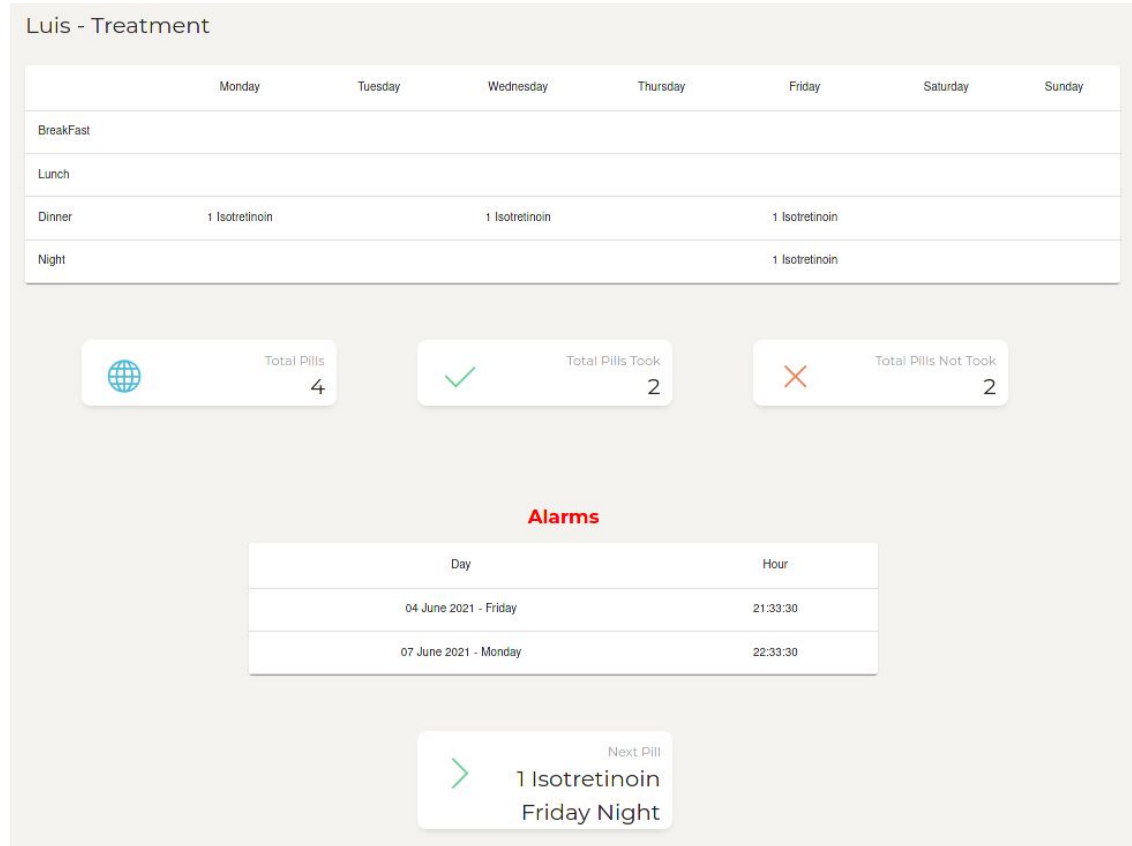


Architecture



Frontend - Dashboard

- Treatment
- Total Pills
- Total Pills Took
- Total Pills Not Took
- Alarms
- Next Pill



Frontend - Create Patient

- Information about patient
- Creation of treatment

Create New Patient

Information about Patient

Name

Age

CREATE

Treatment - Pills

Name

Quantity

Day

MONDAY -

Part of Day

BREAKFAST -

Name

Quantity

Day

WEDNESDAY -

Part of Day

SELECT PART OF DAY -

BreakFast

Lunch

Dinner

Night

+

-



Pycom

Device with LoRa support

Runs on MicroPython



LoRa & MQTT

LPWAN

Long Range w/ Battery
Internet of Objects

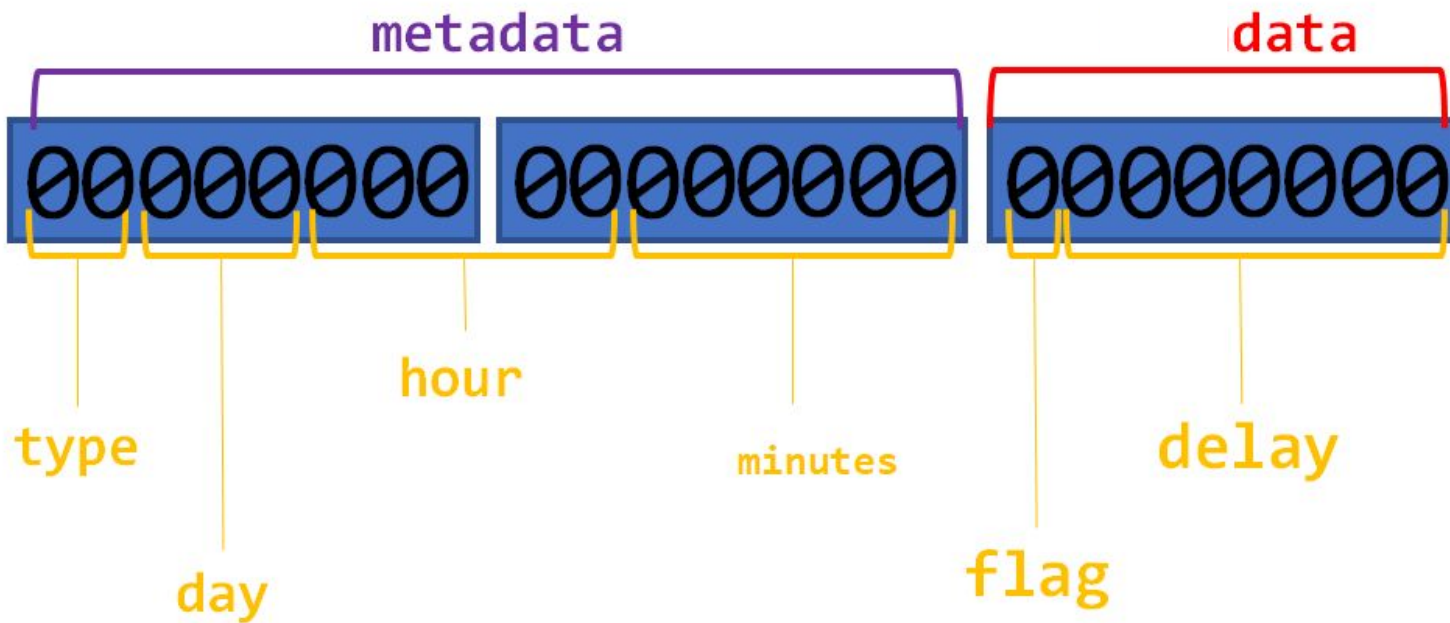


- ✓ **Emerging PHY solutions**
- ✓ **Good for:**
 - Long range
 - Long battery
 - Low cost
 - Positioning
- ❑ **Not good:**
 - High data-rate





Luand Protocol





Demo

PILLS

DASHBOARD

NEW PATIENT

LUIS - SELECT THE PATIENT -

Luis

Zandra

Luis - Treatment

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
BreakFast							
Lunch							
Dinner	1 Isoretinoin		1 Isoretinoin		1 Isoretinoin		
Night					1 Isoretinoin		

Total Pills
4

Total Pills Took
2

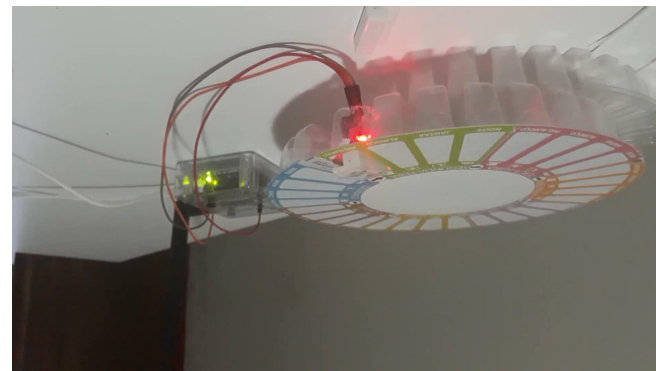
Total Pills Not Took
2

Alarms

Day	Hour
04 June 2021 - Friday	21:33:30
07 June 2021 - Monday	22:33:30

Next Pill

1 Isoretinoin





Constraints & Future Work

Limited number/variety of Sensors

Pills' container size not so compatible

Using soon to be deprecated version of TTN



Repositório

<https://github.com/andrebaiao/CMUP>