

The background of the slide is a photograph of ocean waves. The water is a deep blue at the top, transitioning to a lighter, yellowish-brown color as the waves break and foam. The texture of the water is visible, with small ripples and larger, more turbulent areas where the waves are breaking.

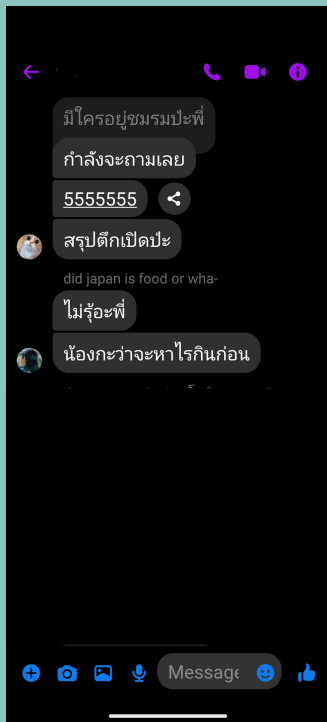
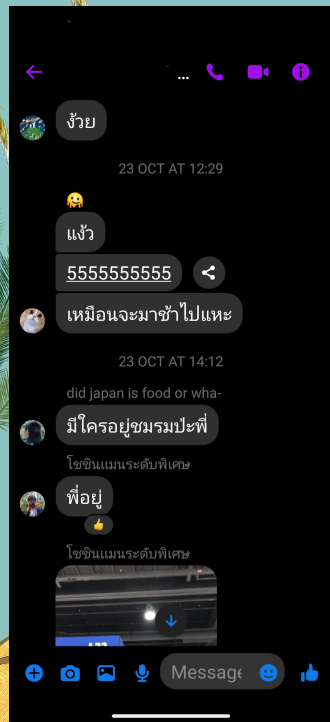
Slow waves

Wave 1

Club assistant



Background

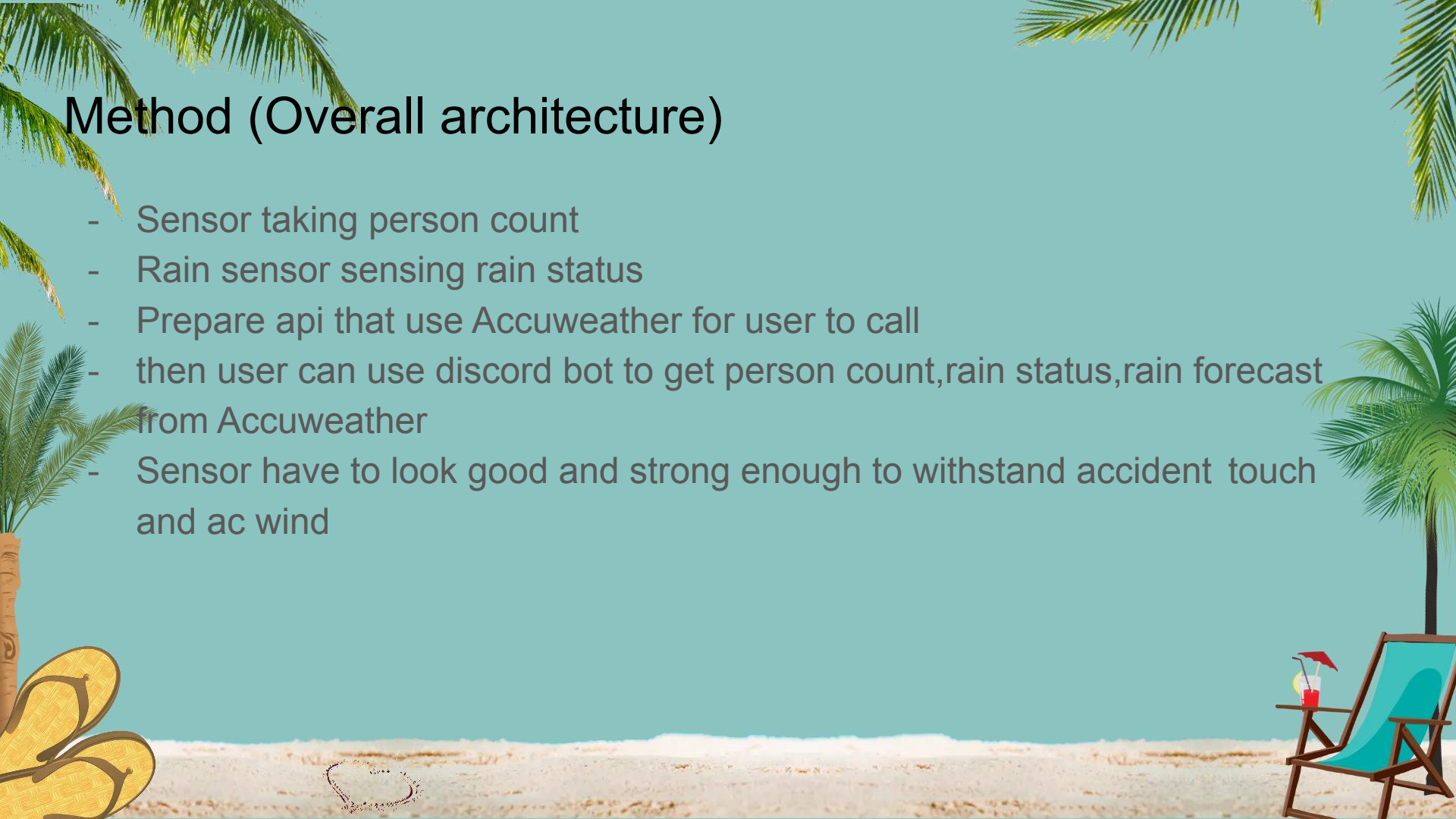


These questions is often asked
If only there is some system that can
answer instantly and accurately without
requiring a person



Method (Overall architecture)

- Sensor taking person count
- Rain sensor sensing rain status
- Prepare api that use Accuweather for user to call
- then user can use discord bot to get person count,rain status,rain forecast from Accuweather
- Sensor have to look good and strong enough to withstand accident touch and ac wind



Data sources (primary and secondary) and collection mechanisms

Primary source:

- Make sensor that check person coming in and out
- Make rain sensor for getting real time situation and for convenience

Secondary source:

- Accuweather api for reliable and well-known information

Database schema used for data integration

mem_check table

Name	Type	Null	Default	Extra
id	int	No	None	AUTO_INCREMENT
count	int	No	0	
source	tinytext	No		
time	timestamp	No	CURRENT_TIMESTAMP	
comment	text	Yes		

Database schema used for data integration

rain_record table

Name	Type	Null	Default	Extra
id	int	No	None	AUTO_INCREMENT
source	tinytext	No		
time	timestamp	No	CURRENT_TIMESTAMP	
comment	text	Yes		

Data sharing API

- <https://iot.cpe.ku.ac.th/red/bxxxxxxxxxx/members>

Return int

- <https://iot.cpe.ku.ac.th/red/bxxxxxxxxxx/closeask>

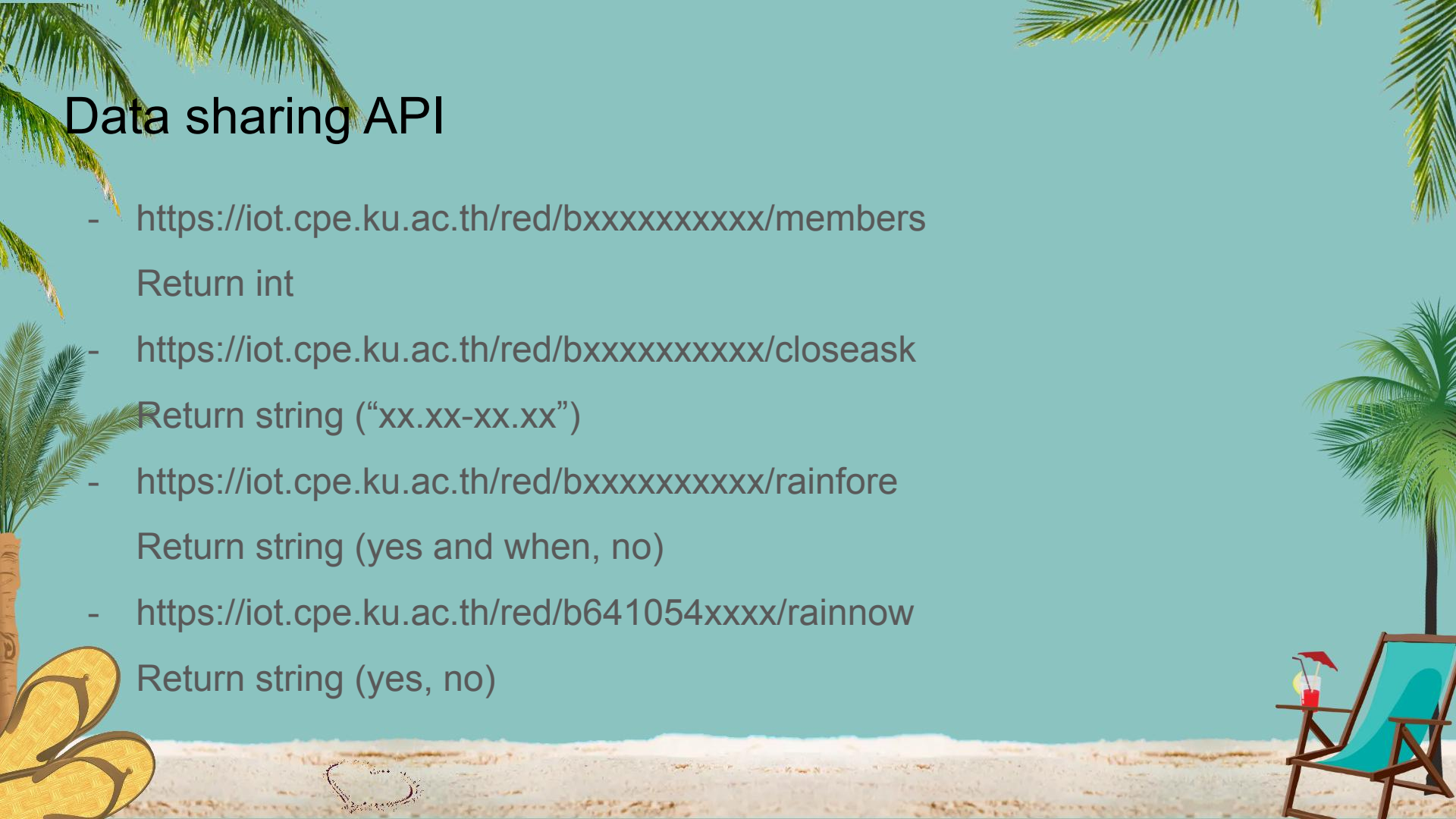
Return string ("xx.xx-xx.xx")

- <https://iot.cpe.ku.ac.th/red/bxxxxxxxxxx/rainfore>

Return string (yes and when, no)

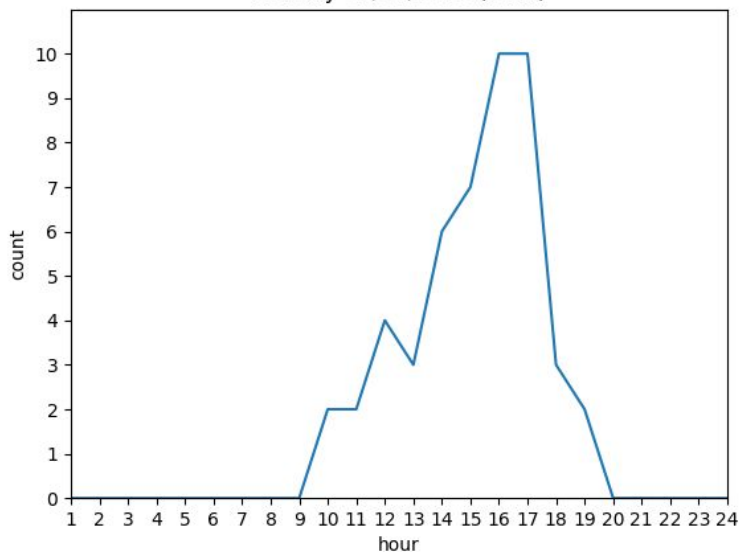
- <https://iot.cpe.ku.ac.th/red/b641054xxxx/rainnow>

Return string (yes, no)

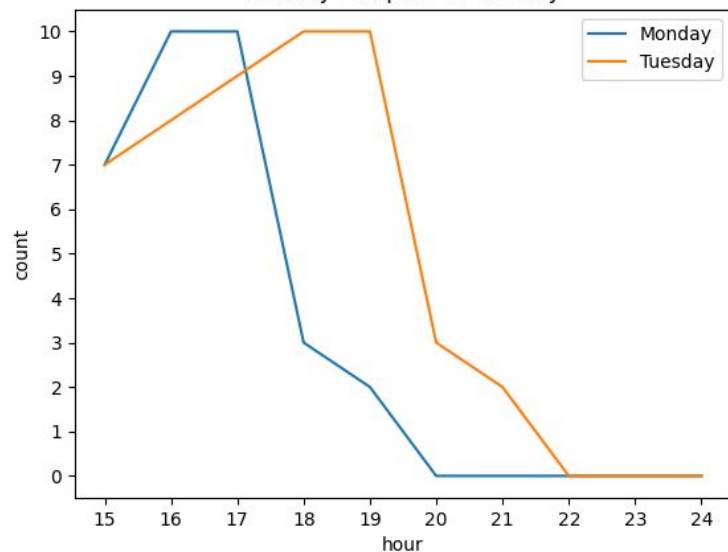


Data visualization (Result)

Monday 27/11/2023 (24hr)



Monday compare to Tuesday





Limitation

- Laser sensor very hard to use
 - No outlet nearby
 - Kidbright can't detect kuwin iot wifi
 - Take information from people so have to make cover
 - Can't control people walking strange or turn in middle of sensor
 - Require person to routinely change battery and check wifi connection
 - One of light sensor value vary too much
 - Battery run out while I'm outside
 - Sensor cable is short
- There is a lot of way to accidentally trigger sensor

Improvement

- Use kidbright light sensor to accurately know when building is closed
- Improve sensor case to be smaller and cover entire sensor inside to prevent tamper and stronger sensor holder
- Use api with discord bot for server assistant
- Better algorithm for sensing person coming in and out
- Add do not disturb option for user

Conclusion

Right now the sensor can handle normal scenario. More improvement is needed for measuring data from people and for handling difficult situation to reduce need to use person

Sensor box improvement is also needed

