

DATA ACQUISITION AND INTEGRATION

My little Farm

PRESENTED BY: TBD



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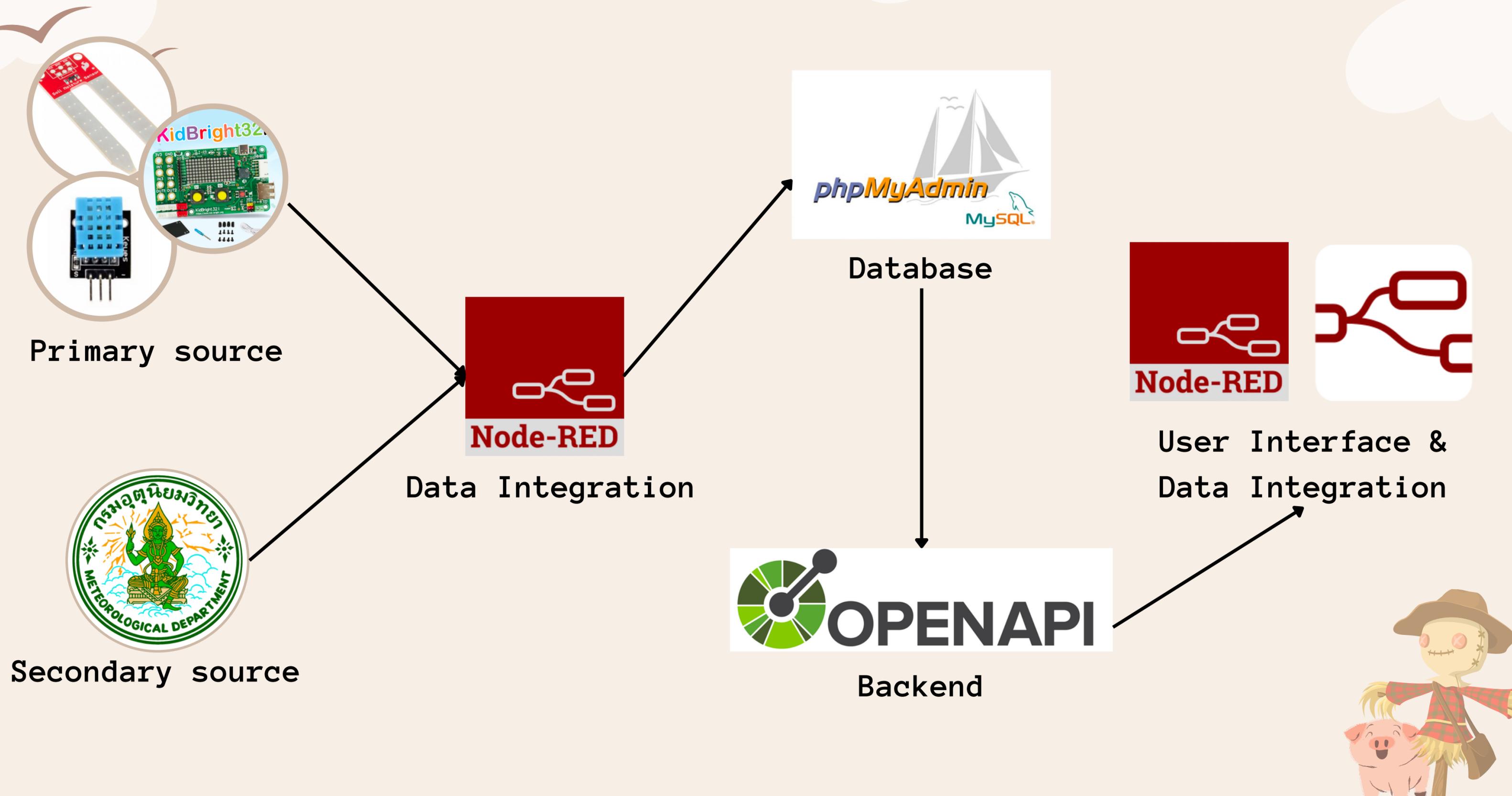


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Overall Architecture



Background & Motivation

Our Smart Farming System utilizes IoT devices and external APIs to transform agriculture, resource optimization, and sustainability. By integrating on-board sensors and external data, our approach offers real-time insights and recommendation controls, empowering farmers with actionable information. The user-friendly web API streamlines data access, contributing to the advancement of agriculture by promoting efficiency through smart farming technologies.



Datasource

Primary source

1. LDR from board
2. Temperature from board
3. Soil moisture sensor
4. Temperature and humidity sensor

Secondary source

1. Hourly rain volume from TMD API
2. Hourly weather condition from TMD API

Database schema used for data integration

hcp_tmd

kidbright_indoor/
kidbright_outdoor

Name	Type	Collation	Attributes	Null	Default	Comments	Extra
id 	int(11)			No	None		AUTO_INCREMENT
ts	timestamp			No	None		
lat	float			No	None		
lon	float			No	None		
cond	int(11)			No	None		
rain	float			No	None		
tc	float			No	None		
rh	float			No	None		

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id 	int(11)			No	None		AUTO_INCREMENT
2	ts	timestamp			No	CURRENT_TIMESTAMP		DEFAULT_GENERATED
3	lat	float			No	None		
4	lon	float			No	None		
5	temp	float			No	None		
6	light	float			No	None		
7	humid	float			No	None		
8	moisture	float			No	None		



What our API provide

- Weather Condition
- Soil moisture level
- Humidity
- Temperature
- Rainfall
- Light intensity

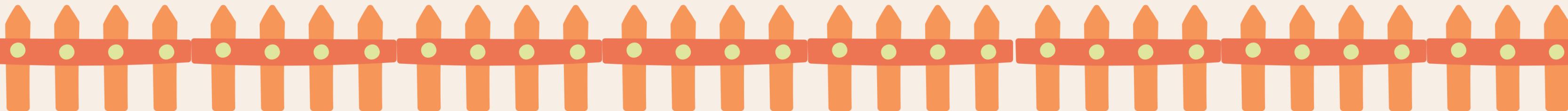


- **Forecast weather data**
- **Current weather data**
- **Condition to watering the plant**
- **Condition to open/close roof**
- **Condition to open/close sun shade**



The background features a light beige gradient. At the top, there are three stylized clouds: a white cloud on the left with three brown birds flying above it, a large light blue cloud in the center, and another white cloud on the right with three brown birds flying above it.

Data visualization





DEMO TIME





**Thank you for
listening!**

Any Question?