Project Design Phase-II
Technology Stack (Architecture & Stack)

DATE	3 NOVEMBER 2022
TEAM ID	PNT2022TMID03994
PROJECT NAME	IOT Based Smart Crop Protection System for Agriculture
MAXIMUM MARKS	4 Marks

TEAM LEAD:
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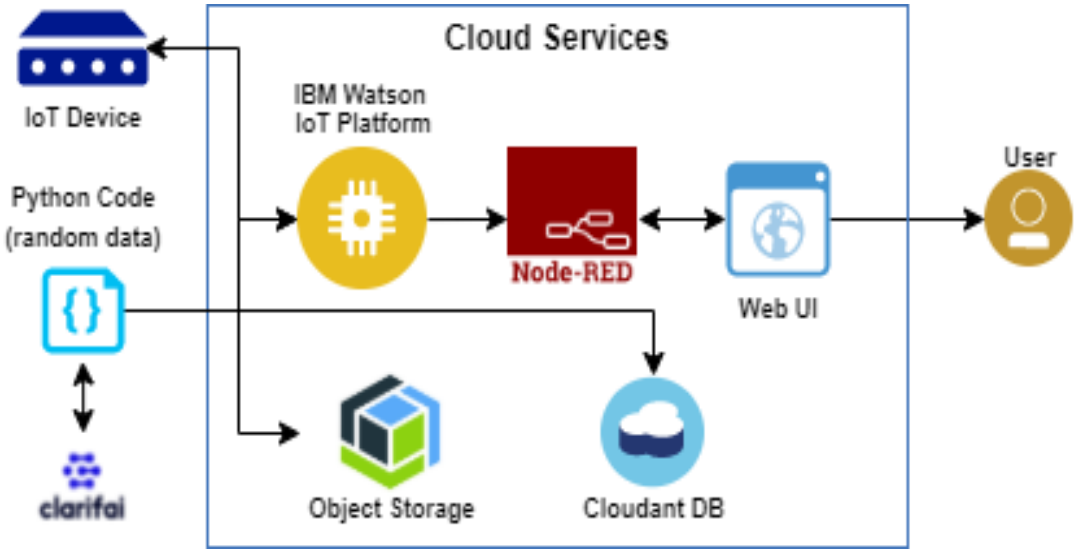
TECHNICAL ARCHITECTURE:
The architectural diagram of the model is shown below and the Technology used is shown in table 1 & table 2.

REFERENCE: https://ieeexplore.ieee.org/document/8993406


Cloud Services
IoT Device
IBM Watson
IoT Platform
Python Code
(random data)
Node-RED
Web UI
User
clarifai
Object Storage
Cloudant DB

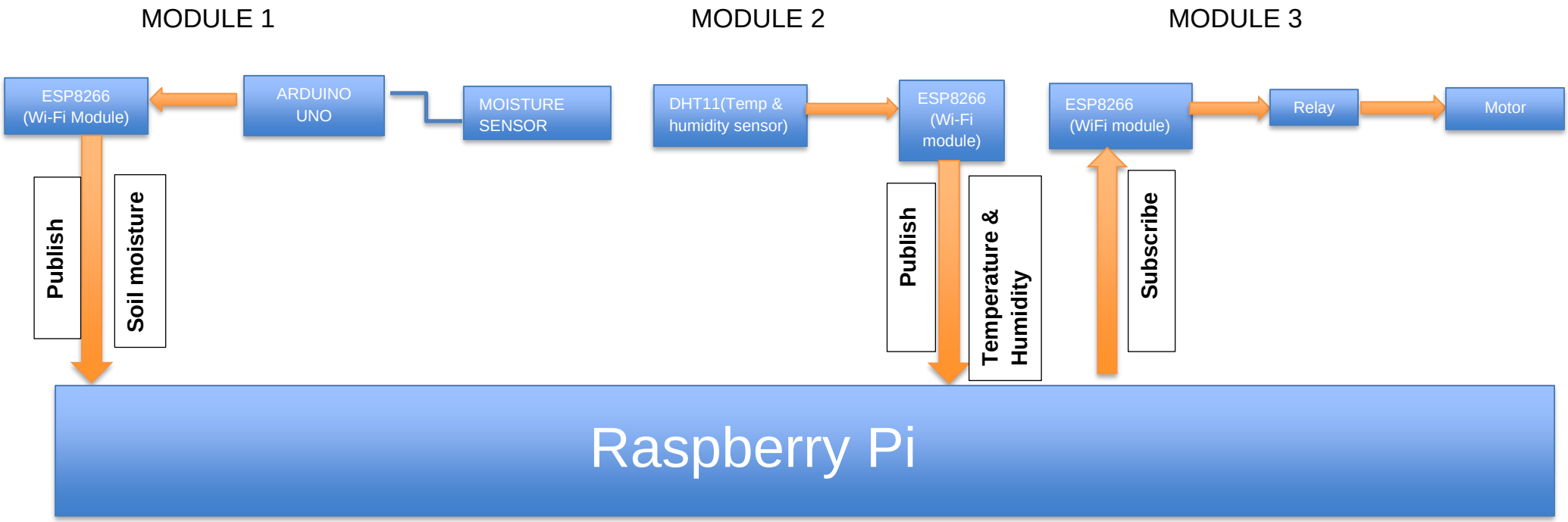


FIG 1: BLOCK DIAGRAM

Components & Technologies:

S.NO	Component	Description	Technology
1.	User interface	How user interacts with application eg. Mobile application	HTML, CSS, Javascript /angular JS/Node red
2.	Application Logic-1	Logic for a process in the application	Java/Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data type, configuration etc	MySQL, NoSQL,etc
6.	Cloud database	Database service on cloud	IBM DB2
7.	File storage	File storage requirements	IBM Block storage or other storage service or local files system
8.	External API-1	Purpose of external API used in application	IBM Weather API, etc
9.	IOT model	Purpose of IoT model is for integrating the sensors with user interface	IBM IoT platform
10.	Infrastructure (Server/cloud)	Application deployment on local system/cloud Local Server Configuration: Cloud Server Configuration:	Local, cloud foundary, kubernetes, etc.

REFERENCES:

https://www.researchgate.net/publication/349940582_Implementation_of_IIoT_based_smart_crop_protection_and_irrigation_system
https://ieeexplore.ieee.org/document/8993406