

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

|               |  |
|---------------|--|
| Date          | 16 October 2022  |
| Team ID       | PNT2022TNID25272   |
| Project Name  | Project - IoT Based Smart Crop Protection System for Agriculture |
| Maximum Marks | 4 Marks  |

**TEAM LEAD:**

HEMACHANDIRAN K

**TEAM MEMBERS:**

NAVEEN P

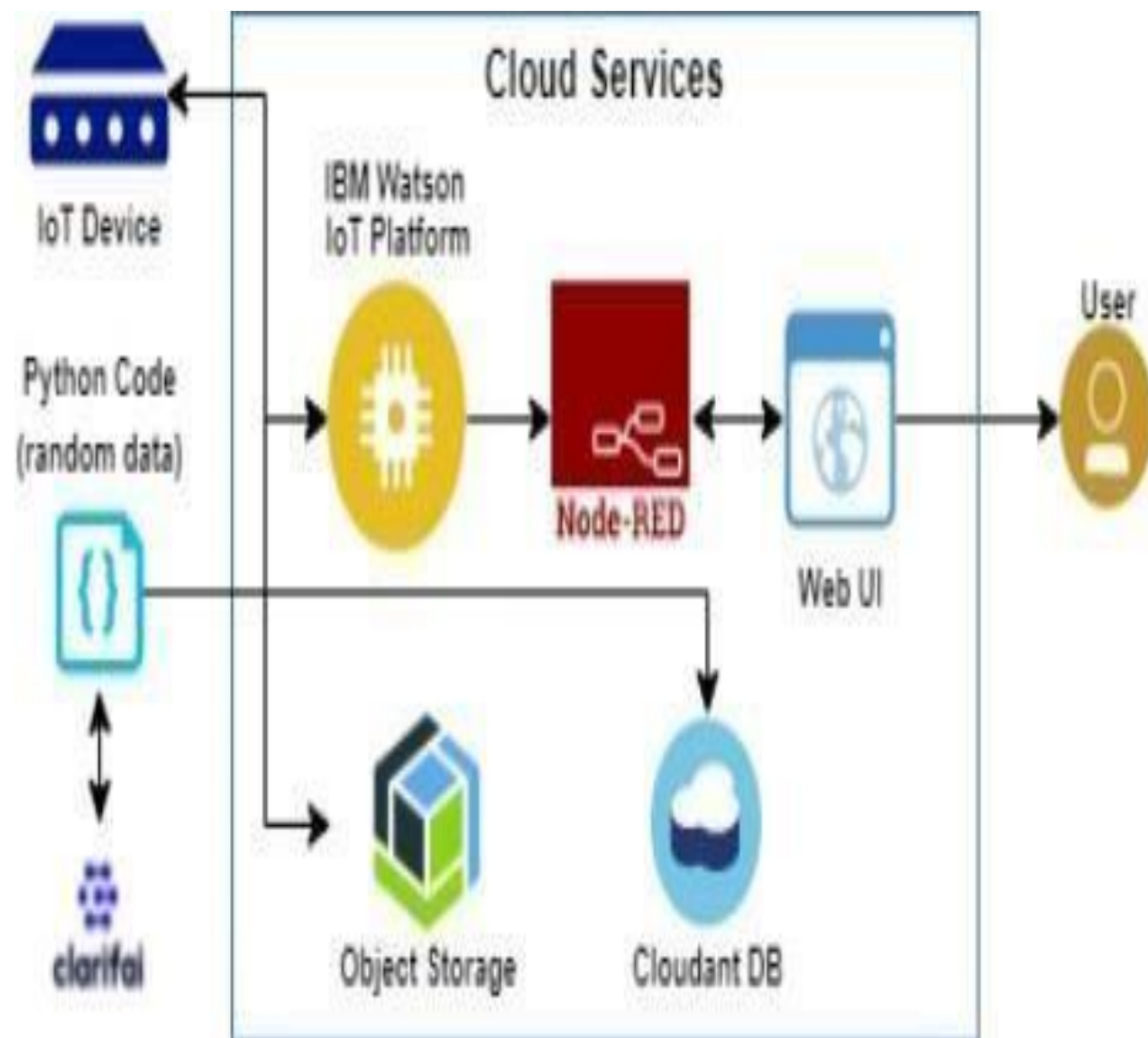
YUVAKESAN L

GOPI KRISHNAN S

**Technical Architecture:**

The architectural diagram of the model is as below and the Technology used is shown in table1 & table 2

**Reference:** <https://smartinternz.com/guided-project/iot-based-smart-agriculture>



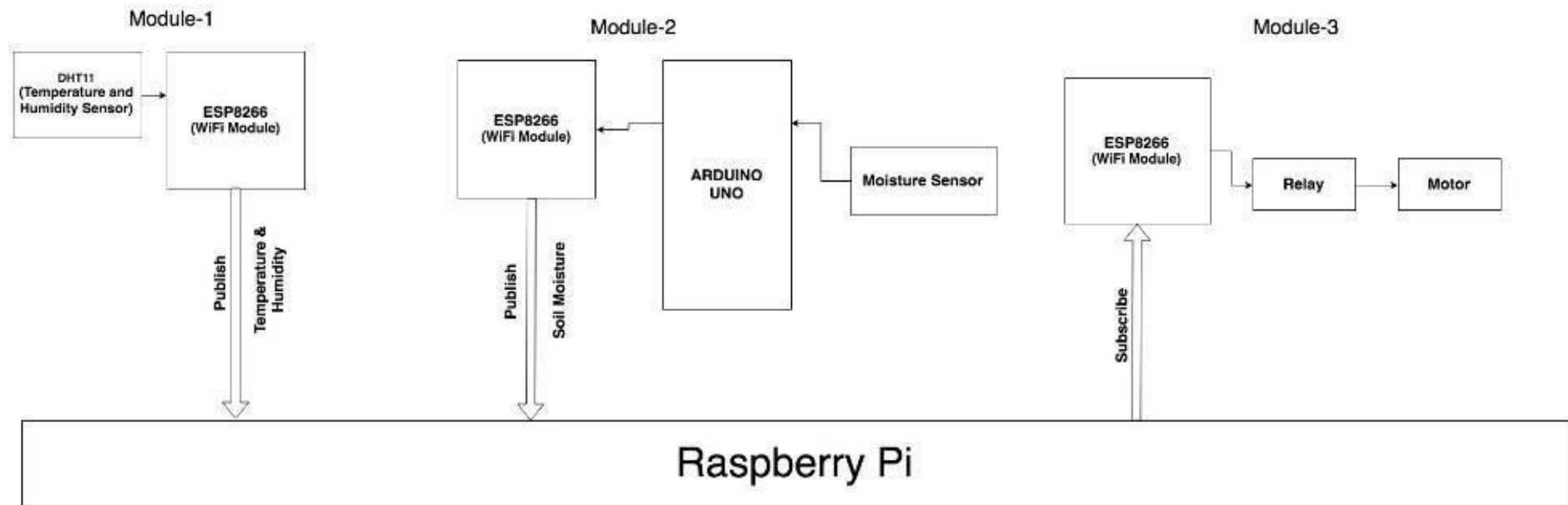


FIG. 1. BLOCK DIAGRAM

**Table-1: Components & Technologies:**

| S.No | Component                       | Description   | Technology   |
|------|---------------------------------|---|--|
| 1.   | User Interface                  | How user interacts with application e.g., 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, Configurations 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 Filesystem |
| 8.   | External API-1                  | Purpose of External API used in the application   | IBM Weather API, etc.  |
| 9.   | IoT Model                       | Purpose of IoT Model is for integrating the sensors with a user interface.                                    | IBM IoT Platform   |
| 10.  | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration : | Local, Cloud Foundry, Kubernetes, etc.                         |

**References:**

<https://smartinternz.com/guided-project/iot-based-smart-agriculture>

<https://www.computerweekly.com/news/252504285/How-IoT-and-machine-learning-are-automating-agriculture>

<https://components.omron.com/us-en/solutions/iot>