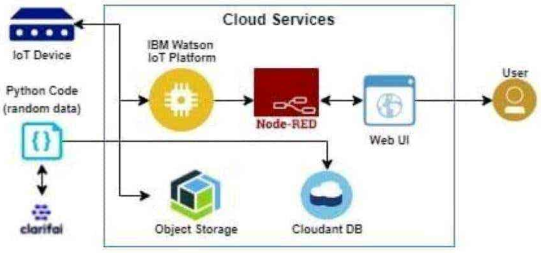
TECHNOLOGY ARCHITECTURE

TECHNICAL ARCHITECTURE:

The deliverable shall include the architectural diagram below and the information as per the table1 & table2.



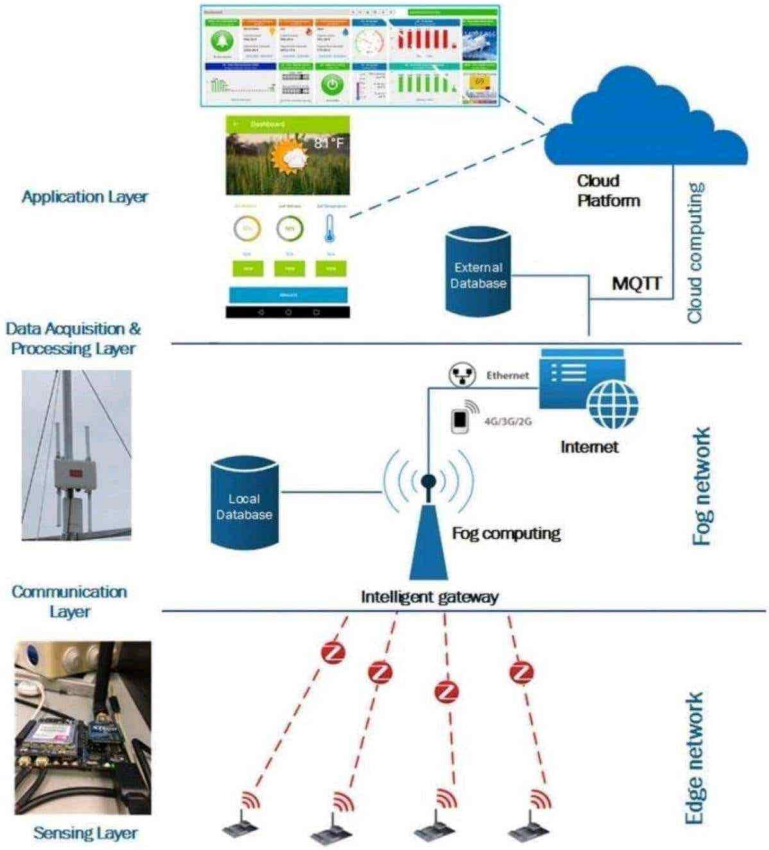


Table 1:

S. No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Sensor, gateway are connected to Watson IOT Platform	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	From Watson IoT Platform data are sent securely up to the cloud using the open, lightweight MQTT	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	APIs are used so that your apps can access and use your live and historical data.	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.

11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table 2: Application characteristics

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used Tinkercard, wokwi	Technology of Opensource framework Arduino, Node-red
2.	Security Implementations	To prevent botnet, ransomware and other IoT attacks, keep device software up to date, change default passwords and monitor network traffic. Segment which data and networks IoT devices can access, and use firewalls to stop intrusions.	Node-Red , Open weather App API, Firewall
3.	Scalable Architecture	Scalability will be key to handling the explosive growth in the Internet of Things (IoT). This means that IoT applications must have the ability to support an increasing number of connected devices, users, application features, and analytics capabilities, without any degradation in the quality of service.	Using Automated bootstrapping, Controlling IOT data pipeline, adopting multiple Data Storage Technology ,Developing Microservices Architecture
4.	Availability	Automatic adjustment of farming equipment is made possible by linking information like crops/weather and equipment to auto-adjust temperature, humidity, etc.	IBM Watson Services

5.	Performance	The idea of implementing integrated sensors with sensing soil and environmental or ambient parameters in farming will be more efficient for overall monitoring.	IBM Watson Services