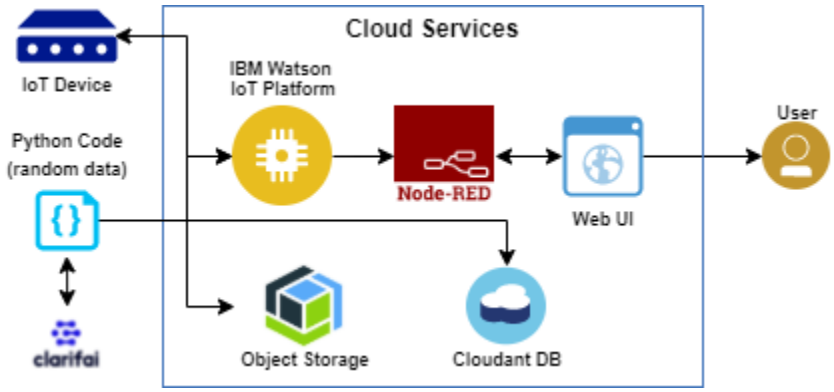
IoT Based Smart Crop Protection System For Agriculture

Technical Architecture:



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

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 / Node-red etc.
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 /Node red
4.	Application Logic-3	Logic for a process in the application	IBM Watson/Node red
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 for integrating the sensors with a user interface	IBM IoT Platform
10.	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	Open source is a source code that is available for modification and redistribution	MIT License
2.	Security Implementations	Monitors and filters the incoming and outgoing network traffic	Encryptions, IBM Controls
3.	Scalable Architecture	Sensors- IoT Cloud based architecture	Cloud computing/AI
4.	Availability	The sensors are widely used to detect the temperature, humidity and moisture level	Sensors
5.	Performance	The ideas of implementing integrated sensors to detect the above characteristic and to indicate the parameters to farmer will be more efficient for overall monitoring.	Software