**SCOPE OF PROJECT**

* **PEOJECT TITLE: SMART AGRICULTURE SYSTEM BASED ON IOT- SB44294**
* **SKILLS REQUIRED: IOT APPLICATION DEVELOPMENT, IOT CLOUD PLATFORM**

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**1.PROJECT OBJECTIVE:**

The objective of this project is to build an application which focuses on helping the farmers. This web application will display the weather data and provides the motor controlling system to reduce the physical work. It will promote the increase in efficiency of the farming. It will display the temperature, humidity parameters. The farmers can track on moisture in the soil and can monitor the motors.

**2. PROJECT TEAM**

**Project Manager**: Vaishnavi Kshirsagar

**Cummins college of Engineering for women, Pune**

**Project Mentor:** SMARTBRIDGE

**3.PROJECT SCHEDULE:**

Project schedule duration is of 16.2 days

**3.1. MILESTONE AND TIMELINE**

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| **MILESTONES** |  |
| PROJECT PLANNING & KICKOFF | 2 DAYS |
| EXPLORE THE IBM CLOUD PLATFORM | 2 DAYS 7 HRS |
| CONNECT THE IOT SIMMULATOR TO WATSON IOT PLATFORM | 0.5 HRS |
| CONFIGURE THE NODRED TO GET THE DATA FORM IBM IOT PLATFORM AND OPEN WEATHER API | 4 DAYS |
| BUILDING A WEB APP | 4 HRS |
| CONFIGURE YOUR DEVICE TO RECIEVE THE DATA FROM THE WEB APPLICATION AND CONTROL THE MOTORS | 2 HRS |

**4.TECHNICAL REQUIREMENTS**

1. **SLACK**

* Slack is a platform used for the communication between the project manager, mentor and other project teams.
* It is similar to other messaging applications and easy to use and works faster with your tools.
* By creating a slack account, you can access your slack channel and have information related to your project.

1. **GITHUB**

* GitHub is necessary tool for storing the development of your project.
* You can create your Git-repository and share your files easily.
* It is an open source does not require licence for handling it.
* GitHub lets you work together on a project

**5.SOFTWARE REQUIREMENTS**

1. IBM CLOUD

For creating the device using PAAS service in the IOT platform.

1. NODE-RED

For installing IBM IOT nodes to get weather data, sensor data and creating motor commands.

3.IOT SENSOR

For simulations to display temperature, humidity &

object temperature values.

4.OPEN WEATHER MAP

For getting current weather forecasting data.

5.PYTHON 3

To retrieve the motor commands

**6.TEAM DELIVERABLES**:

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| This project delivers an easily accessible & adaptable web application. |
| This Smart Agriculture System based on IoT can monitor soil moisture and climatic conditions to grow and yield a good crop. |
| Application enables farmers to monitor the temperature, humidity and soil moisture parameters along with weather forecasting details on mobile or laptop. |
| It will have function to water the crop by controlling the motors using the commands. |
| Even if the farmer is not present near his crop, he can water his crop by controlling the motors using the mobile application from anywhere. |