**Project Design Phase-II**
**Solution Requirements (Functional & Non-functional)**

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|---|---|
| Date | 28 October 2022 |
| Team ID | PNT2022TMID34531 |
| Project Name | IoT based smart crop protection system for agriculture |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|---|---|---|
| FR-1 | Motion Detection | Detection of animal movement in the agriculture field. |
| FR-2 | Temperature | Monitoring the temperature and giving the alert signal to the farmer. |
| FR-3 | Humidity | Monitoring the humidity and giving the alert signal to the farmer. |
| FR-4 | Controlling the Electrical Appliances | Switch the Light ON and OFF in the field.<br>Switch the Motor ON and OFF in the field. |
| FR-5 | SMS | Alert the user about the above instances. |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

| NFR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | The Project is easy to use and implement. It is more user friendly. |
| NFR-2 | **Security** | It is based on IBM cloud hence the security will be high by default. |
| NFR-3 | **Reliability** | As we use computer vision the reliability is very high. |
| NFR-4 | **Performance** | It can withstand any kind of environment as it is based on crop protection. |
| NFR-5 | **Availability** | It is always available since the sensors will sense the data and transmit to cloud frequently for processing. |
| NFR-6 | **Scalability** | It is scalable to a great extent since it used IBM cloud and Node Red. |