#### Project Design Phase-II

#### Solution Requirements (Functional & Non-functional)

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| **Date** | **8 November 2022** |
| **Team ID** | **PNT2022TMID05601** |
| **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.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Install the app.  Signing up with GMAIL or phone number  Creating a profile.  Understand the guidelines. |
| FR-2 | User Confirmation | Email or phone number verification required via OTP. |
| FR-3 | Accessing datasets | Datas are obtained by Cloudant DB. |
| FR-4 | Interface sensor | Connect the sensor and the application  When animals enter the field , the alarm is generated. |
| FR-5 | Mobile application | It is used to control motors and field sprinklers. |

**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | This project’s contributes the farm protection through the smart protection system. |
| NFR-2 | **Security** | It was created to protect the crops from animals. |
| NFR-3 | **Reliability** | Farmers are able to safeguard their lands by help of this technology. They will also benefits from higher crop yields, which will improve our economic situation. |
| NFR-4 | **Performance** | When animals attempt to enter the field, IOT devices and sensors alert the farmer via message. |
| NFR-5 | **Availability** | We can defend the crops against wild animals by creating and implementing resilient hardware and software. |
| NFR-6 | **Scalability** | This system’s integration of computer vision algorithms with IBM Cloudant services makes it more efficient to retrieve photos at scale, enhancing scalability. |