SOLUTION REQUIREMENTS

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| **Project Name** | **IOT Based Smart Crop Protection System for Agriculture.** |
| **Team ID** | **PNT2022TMID31899** |
| **Date** | **15 October 2022** |

**FUNCTIONAL REQUIREMENTS :**

Following are the functional requirements of the proposed solution.

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| **S.NO.** | **Functional Requirement.** | **Sub Requirement.** |
| **1.** | **User Visibility** | **Sense animals nearing the crop field & sounds alarm to woo them away as well as sends SMS to farmer using cloud service.** |
| **2.** | **User Reception** | **The Data like values of Temperature, Humidity, Soil moisture Sensors are received via SMS.** |
| **3.** | **User Understanding** | **Based on the sensor data value to get the information about the present of farming land.** |
| **4.** | **User Action** | **The User needs take action like destruction of crop residues, deep plowing, crop rotation, fertilizers, strip cropping, scheduled planting operations.** |

NON-FUNCTIONAL REQUIREMENTS :

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

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| **S.NO.** | **Non-Functional Requirement.** | **Description.** |
| **1.** | **Usability** | **Mobile Support Users must be able to interact in the same roles & tasks on computers & mobile devices where practical, given mobile capabilities.** |
| **2.** | **Security** | **Data requires secure access to must register and communicate securely on devices and authorized users of the system who exchange information must be able to do.** |
| **3.** | **Reliability** | **It has a capacity to recognize the disturbance near the field and doesn’t give a false caution signal.** |
| **4.** | **Performance** | **Must provide acceptable response times to users regardless of the volume of data that is stored and the analytics that occurs in background. Bidirectional, near real-time communications must be supported. This requirement is related to the requirement to support industrial and device protocols at the edge.** |

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| **5.** | **Availability** | **IOT Solutions and domains demand highly available systems for 24 x 7 operations. Isn’t a critical production application, which means that operations or production don’t go down if the IOT solution is down.** |
| **6.** | **Scalability** | **System must handle expanding load & data retention needs that are based on the upscaling of the solution scope, such as extra manufacturing facilities and extra buildings.** |