SOLUTIONREQUIREMENTS

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| **Project Name** | **IOTBasedSmart CropProtectionSystemforAgriculture.** |
| **TeamID** | **PNT2022TMID51290** |

**FUNCTIONALREQUIREMENTS:**

Followingarethefunctionalrequirements oftheproposed solution.

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| **S.NO.** | **FunctionalRequirement.** | **SubRequirement.** |
| **1.** | **UserVisibility** | **Sense animals nearingthe crop field & soundsalarm to woo themaway as well as sendsSMS to farmer usingcloud service.** |
| **2.** | **UserReception** | **TheDatalikevaluesofTemperature,Humidity, Soilmoisture Sensors arereceived viaSMS.** |
| **3.** | **UserUnderstanding** | **Basedonthesensordata value to get theinformation about thepresent of farmingland.** |
| **4.** | **UserAction** | **The User needs takeaction like destructionof crop residues, deepplowing,croprotation,fertilizers, stripcropping, scheduledplantingoperations.** |

NON-FUNCTIONALREQUIREMENTS:

Followingarethenon-functionalrequirements oftheproposed solution.

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| **S.NO.** | **Non-FunctionalRequirement.** | **Description.** |
| **1.** | **Usability** | **Mobile Support Users mustbeabletointeractinthesame roles & tasks oncomputers & mobile deviceswherepractical,givenmobilecapabilities.** |
| **2.** | **Security** | **Data requires secure accessto must register andcommunicate securely ondevicesandauthorizedusersof the system who exchangeinformation must be able todo.** |
| **3.** | **Reliability** | **It has a capacity to recognizethedisturbancenearthefieldand doesn’t give a falsecaution signal.** |
| **4.** | **Performance** | **Must provide acceptableresponse times to usersregardless of the volume ofdata that is stored and theanalytics that occurs inbackground. Bidirectional,near real-timecommunications must besupported. This requirementis related to the requirementto support industrial anddeviceprotocols attheedge.** |

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| **5.** | **Availability** | **IOT Solutions and domainsdemand highly availablesystems for 24 x 7 operations.Isn’t a critical productionapplication,whichmeansthatoperationsorproductiondon’t go down if the IOTsolution isdown.** |
| **6.** | **Scalability** | **System must handleexpandingload& dataretention needs that arebased on the upscaling of thesolution scope, such as extramanufacturing facilities andextrabuildings.** |