Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	19 September 2022
Team ID	PNT2022TMID22829
Project Name	Project- 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 Requirements (Epic)	Sub Requirement (Story/Sub-Task)
FR 1	User Registration	Install the app Signing up with Gmail or phone number Creating a new profile Understand the guidelines which are given.
FR 2	User Confirmation	Email or phone number verification required via OTP
FR 3	Accessing datasets	The data like pictures and alert regarding animal entries are received through SMS. Data's 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	User Action	The user needs to take action like detecting through crop rotation, fertilizer, strip cropping.

Non-functional Requirements:

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

NFR NO.	Non-Functional Requirements	Description
NFR 1	Usability	This project contributes to the farm protection through the smart protection system and use new technologies and also increase the quality of its crop.
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 get some good benefits from higher crop yields, which will improve our economic situation.
NFR 4	Performance	When animals attempt to enter the crop field, IOT devices and sensors alert the farmer via message and maintain good yields.
NFR 5	Availability	Agriculture fences are quite an effective wild animal protection system and We can defend the crops against wild animals by creating and implementing resilient hardware and software
NFR 6	Scalability	The develop system will not harmful and injurious to animals as well as human beings through the system. This system's integration of computer vision algorithms with IBM cloudant services makes it more efficient to retrieve photos at scale enhancing scalability