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

Date	17 October 2022
Team ID	PNT2022TMID32413
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	User registration	Download the app Registration through Gmail Create an account Follow the instructions
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Interface Clarifai service	Interface Clarifai service and so if animals enter the field it gives alarm.
FR-4	Interface sensors	Interface sensors like temperature and humidity sensor to measure the values and to irrigate the field
FR-5	Accessing datasets	Datasets are retrieved from Cloudant DB
FR-6	Mobile application	Motos and sprinklers in the field can be controlled by mobile application.

Non-functional Requirements:

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

NFR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The smart protection system defines that this project helps farmers to protect the farm.
NFR-2	**Security**	We have designed this project to secure the crops from animals.
NFR-3	**Reliability**	This project will help farmers in protecting their fields and save them from significant financial losses. This will also help them in achieving better crop yields thus leading to their economic well being.
NFR-4	**Performance**	IOT devices and sensors are used to indicate the farmer by a message when animals try to enter into the field and also we use an SD card module that helps to store a specified sound to scare the animals.

NFR-5	**Availability**	By developing and deploying resilient hardware and software we can protect the crops from wild animals.
NFR-6	**Scalability**	Since this system uses computer vision techniques integrated with IBM cloudant services helps efficiently to retrieve images in large scale thus improving scalability