Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	17 October 2022
Team ID	PNT2022TMID30822
Project Name	Project - Artificial Intelligence – Fertilizers Recommendation System for Disease Prediction.
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	Registration through Mobile number Registration through Gmail
FR-2	User Confirmation	Confirmation via OTP Confirmation via Email
FR-3	User Country	User should select the country to which they belong.
FR-4	Crop details	User can interact through providing details like image of the crop and soil or providing details of the soil like nitrogen, phosphorous, potassium, pH level.
FR-5	Prediction	The system will predict the issue from User details through train set and test data.
FR-6	Suggestion and Prevention	The system will suggest the solution to the issue through image or description.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The system is highly user friendly as the User can provide details and get suggestions from wherever they are. User can easily provide the details of their crop issue and get prevention methods and detects if the crop is affected by diseases.
NFR-2	**Security**	The system provides good security. The system wants the User to provide only their Country and their crop details to detect the disease, suggest the solution and measures to prevent it.
NFR-3	**Reliability**	The system will operate in all kind of environments with proper User and crop details. Farmers are unaware of which crop to grow, and what is the right time and place to start due to uncertainty in climatic conditions. So this application can be more useful for smart farming.

NFR-4	**Performance**	This application provide most accurate prediction of diseases in crop and suggest the required methods to cure it and provide information like what kind of fertilizers need to be used. This application will be a great support to farmers wherever they are.
NFR-5	**Availability**	The system can be used by any farmers across the list of Countries mentioned in the application. Wherever the farmer is, they can use this application and get benefit from accurate identification of plant diseases which is essential to ensure high quantity and best quality of crops.
NFR-6	**Scalability**	Provide nutrients not available in the soil. Replace nutrients removed at harvest. Balance nutrients for better produce quality and higher yield using artificial intelligence. Scalability is quick and high and also very simple to do.