Design Phase – II

Functional requirements

Date	11 October 2022
Team id	PNT2022TMID01288
Project name	Fertilizer recommendation system for disease prediction
Maximum marks	4 marks

Agriculture is the most important sector in today's life. Most plants are affected by a wide variety of bacterial and fungal diseases. Diseases on plants placed a major constraint on the production and a major threat to food security. Hence, early and accurate identification of plant diseases is essential to ensure high quantity and best quality. In recent years, the number of diseases on plants and the degree of harm caused has increased due to the variation in pathogen varieties, changes in cultivation methods, and inadequate plant protection techniques.

An automated system is introduced to identify different diseases on plants by checking the symptoms shown on the leaves of the plant. Deep learning techniques are used to identify the diseases and suggest the precautions that can be taken for those diseases.

Functional requirement :

Fr.no	Functional requirement	Sub requirement
Fr-1	User registration	Registration through form Registration through Gmail
Fr-2	User confirmation	Confirmation OTP via phone number and Email
Fr-3	Capturing image	Capture the image of the leaf And check the parameter of the Captured image.
Fr-4	Image processing	Upload the image for the Prediction of the disease in the leaf.
Fr-5	Leaf identification	Identify the leaf and predict the Disease in leaf.
Fr-6	Image description	Suggesting the best fertilizer for The disease.

Business Requirements	User Requirements	Product Requirements
The Proposed system can be deployed in agricultural lands, plant nurseries. The main advantage of employing an AI model will be a cost-effective solution for agriculture. It eliminates the need for soil testing and the results are provided instantly and much faster than conventional methods for crop disease prediction.	The Proposed system can be optimized for detecting harmful diseases without spending more money and effort. The AI model is built in a way such that each farmer can get benefitted and fully satisfied in terms of production as well quality of the goods produced without spending huge amount of money.	Producing quality goods is very much essential for human survival especially food items. So employing an AI model to produce quality goods without spending much money is important in modern world.