PROJECT DESIGN PHASE-I

PROPOSED SOLUTION TEMPLATE

Date	20 September 2022
Team ID	PNT2022TMID15933
Project Name	Project – Fertilizer Recommendation System for disease prediction
Maximum Marks	2 Marks

PROPOSED SOLUTION:

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Agriculture is an extremely risky industry and our farmers are at the forefront of the industry. Farmer's face several problems which include crops get affected by diseases, the soil is not being nutritious enough for the plant to grow, etc. All these factors reduce the overall yield. In India, more than 70% population is dependent on agriculture. More than 15% of the crops get wasted in India due to diseases and hence it has become one of the major concerns to be resolved
2.	Idea / Solution description	The solution for problem is by using Deep learning technique, which recommended the fertilizer for the affected crops. The fertilizer recommendation model provide the best recommendation for the crop based on their nutrition value, the most important issue is plant gets easily affected by diseases. We also create a website for using this application as this application is used anywhere by anyone. We have tried many different algorithms for finding better accuracy to recommend right fertilizer for affected crop.
3.	Novelty / Uniqueness	The combination of increasing global Smartphone penetration in the rural areas and recent advances in computer vision made possible by deep learning has paved the way for web assisted disease diagnosis also we have created an open source easy to use web application to address the issues which help to improve crop production.

4.	Social Impact / Customer Satisfaction	The farmer who uses this application has ability to minimize the manpower needed for recommendation. Using this model, the agriculture domain will have a great impact on the environment and there is an increase in the productivity and yield. The buyer and seller will also be more beneficial by attaining more profit
5.	Business Model (Revenue Model)	The usages of this application for predicting the fertilizers, analyzing the disease in a touch make the farmers easy with minimal subscription. Using this model, the business revenue has also been attained. This action adds a lot of value to the company and business in society
6.	Scalability of the Solution	The machine learning model which is trained using CNN have the capacity to scale when needed and operated with the same speed and less complexity. Over model accuracy will improve for more testing and training data