Project Design Phase-I
Proposed Solution

Date	14 October 2022
Team ID	PNT2022TMID30713
Project Name	Fertilizers recommendation system for disease prediction
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	• Farmers usually detect the crop diseases and plant diseases with their naked eye which makes them take tough decisions on which fertilisers to use. • In case the farmer makes wrong predictions and uses the wrong fertilizers or more than the normal dose (or) threshold or Limit (every plant has some threshold fertilizers spraying to be followed), it will mess up the whole plant (or) soil and cause enough damage to plant and fields. • It is necessary to develop crop yield prediction and fertilizers recommendation system which predicts crop yield based on soil nutrients crop yield data and recommend fertilizer for selected crop based on different datasets like fertilizer data,location data and crop yield data
2.	Idea / Solution description	• Implementation of artificial intelligence for identification of pests and recommendation of insecticides using TPF-CNN. • The combination of two major things required in farming in one system is spraying proper insecticides and adding the needed fertilizer amount to the soil. • Implementation of soil sensor for soil NPK nutrient analysis and recommendation of fertilizers accordingly.
3.	Novelty / Uniqueness	• Efficient approach for controlling the overuse of insecticides and fertilizers in farming.

		• Time efficient approach compared to KNN, SVM and ANN. • It can suggest and predict best and correct fertilizers for disease in the plant.
4.	Social Impact / Customer Satisfaction	• Yield right crop at the right time, balancing the crop production, control plant disease, economic growth and planning to reduce the crop scarcity. Hence to detect and recognize the plant diseases and to recommend fertilizer it is necessary to provide symptoms in identifying the disease at its earliest. Hence implemented new fertilizers Recommendation System for crop disease prediction.
5.	Business Model (Revenue Model)	• Typically dedicate 10% of their AI investment to algorithms, 20% to technologies and 70% to embedding AI into business processes and agile ways of working. In other words, companies invest twice as much in people and processes as they do in technologies.
6.	Scalability of the Solution	• This can be improved by introducing online purchases crops, fertilizers,etc., easily