Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID09294
Project Name	Project – Fertilizers Recommendation System for Disease Prediction
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Farmers' conventional methods of agricultural cultivation are ineffective. It does not make proper use of all available resources. Farmers are unable to detect crop diseases due to a lack of knowledge and old practices, which often result in soil nutrient deterioration and exhaustion. As a result, crop failure occurs. Growing only certain crops depletes the soil, and if the crops are harmed by illnesses, farmers are uninformed of how to recover such crops. Food needs cannot be met until and unless efficient resource management and use is implemented.
2.	Idea / Solution description	Efficient approach for controlling the overuse of insecticides and fertilizers in farming. Implementation of artificial intelligence for identification of pests and recommendation of insecticides using TPF-CNN.
3.	Novelty / Uniqueness	The proposed method uses SVM to classify tree leaves, identify the disease and suggest the fertilizer. The proposed method is compared with the existing CNN based leaf disease prediction. The proposed SVM technique gives a better result when compared to existing CNN.
4.	Social Impact / Customer Satisfaction	It also helps farmer to perform the activities like crop management including applications on yield prediction, disease detection, weed detection, crop quality, and growth prediction etc. This chapter describes the case study on “Crop Disease Detection and Yield prediction”. The study includes identification of crop Agriculture is the mainstay of a rising economy in India. condition, disease detection, prediction about specific crop and recommendation using machine learning algorithms. It gives an idea about how recommender system is used in agriculture for disease detection and prediction.

5.	Business Model (Revenue Model)	Being an extremely vital industry as it manufactures some of the most important raw materials required for crop production, it is not wrong to say that the success of the agricultural sector in India is largely dependent on the fertilizer industry. Fertilizers are extensively being used to improve per hectare production of crops that can be used for food and industrial applications. If you like the idea of making a profit by helping people work with the soil, you might enjoy being a part of the fertilizer industry.
6.	Scalability of the Solution	Fertilizers replace the nutrients that crops remove from the soil. Without the addition of fertilizers, crop yields and agricultural productivity would be significantly reduced. That's why mineral fertilizers are used to supplement the soil's nutrient stocks with minerals that can be quickly absorbed and used by crops.