Project Design Phase-I
Proposed Solution

Date	9 October 2022
Team ID	PNT2022TMID52605
Project Name	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)	Agriculture is crucial for survival in today's world and helps conserve natural resources. Agriculture is extremely difficult in the current climate because of the numerous natural disasters that occur on a daily basis. Many diseases affect most plants due to pollution in the water, air, and soil. One of the most difficult challenges in agriculture is identifying the illness. The majority of plants are plagued by leaf disease, and it is challenging to locate a suitable fertilizer to heal it. Detecting the condition at an early stage is critical since it is simple to treat.
2.	Idea / Solution description	An automated system is created to identify different diseases on plants by investigating the images of leaves of the plant. This system uses deep learning Convolution Neural Network (CNN) technique to detect and classify leaf images to their respective class of diseases. Based on the detection suitable fertilizers can be recommended to the end users to overcome the disease. This will result to high yield and heathy crop production.
3.	Novelty / Uniqueness	We will accurately classify the diseases and also display the probability value associated with different type of diseases. Moreover, we are constructing a customised version of CNN with 5 layers and are not using any pretrained deep-learning models.
4.	Social Impact / Customer Satisfaction	Our Farmers (customers) will be more satisfied by our system. They can take timely decision to treat crop diseases early.

		Our accurate recommendation of fertilizers will lead to faster diagnosis of plant diseases. Moreover, this is eco-friendly project as it is hosted as online web application. Even young and new farmers can diagnose crop diseases. Hence, healthy crops can be produced and a healthy society is built eventually.
5.	Business Model (Revenue Model)	Pay per user involves unlimited access of features while charging them only for service use. The product can be maintained by collaborating with government and agricultural ministries. Advertising plays an important role in revenue which include search engine and social marketing. This might include fertilizers company's to advertised their product in our product sites.
6.	Scalability of the Solution	This solution is highly scalable. It can be improved by promoting online purchases of seeds, fertilizers, etc. As the solution is a customized developed one, changes can be easily accommodated as per arising needs.