Project Design Phase-I
Proposed Solution Template

Date	10 November 2022
Team ID	PNT2022TMID36687
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)	The Covid19 pandemic has already had a damaging effect on agriculture and allied sectors across the globe. While local ecosystems have encountered severe disruption, global supply chains have completely crashed. The crisis will soon pass but one of its most critical impacts will be – firstly, faster adoption of digital technologies and secondly, increased mechanization across the value chains. This is where data science combined with artificial intelligence and machine learning (AI/ML) will come increasingly into play. The whole concept of smart farming, which is making agriculture more efficient and sustainable, and thus profitable, is largely driven by AI/ML technologies. These technologies can be used in crop and water management, pest and disease detection, crop health monitoring and yield estimation, cultivating and harvesting by smart tractors without drivers as well as other types of forecasts and predictive analytics.
2.	Idea / Solution description	A key application of AI has been helping in identifying pests and diseases. Custom databases for specific crops and helps farmers identify pests and plant diseases with nothing but just a mobile phone. This saves human intervention, cost of hiring an expert and, most importantly, there is no delay in diagnosis. Sensors are also being used to detect and target weeds. In some instances, robots are used to uproot weeds and in others, it helps in targeted application of pesticides. One research team that used AI technology to detect disease in cassava plants in Tanzania found that AI was able to detect disease with 98 percent accuracy. Instead of spraying pesticides uniformly over the entire cropping area which is an expensive proposition

		for the farmer, ML can aid in targeting the inputs precisely in terms of time, place and affected plants. This can reduce the chemicals used and improve the quality of produce, and save cost.
3.	Novelty / Uniqueness	This application can advise good fertilizer for diseases in the plant by recognizing the images.
4.	Social Impact / Customer Satisfaction	Consumers Farming is one of the major sectors that influences a country's economic growth. In country like India, majority of the population is dependent on agriculture for their livelihood. Many new technologies, such as Machine Learning and Deep Learning, are being implemented into agriculture so that it is easier for farmers to grow and maximize their yield.
5.	Business Model (Revenue Model)	The application is recommended based on farmers necessity.
6.	Scalability of the Solution	This application might be improved by introducing online purchases of crops fertilizers seamlessly