

Project Design Phase-I Problem Solution Fit Template

Date	01 October 2022
Team ID	PNT2022TMID48006
Project Name	Fertilizers recommendation system for disease prediction

Problem-Solution Fit		Purpose / Vision: To identify and recommend appropriate fertilizer for the plants with diseases by predicting them.		Version: 1	
Define CS, fit into CL	1. CUSTOMER SEGMENT(S) CS <ul style="list-style-type: none"> Geographic Demographic Psychographic Behavioral 	6. CUSTOMER LIMITATIONS CL <small>EG. BUDGET, DEVICES</small> <ul style="list-style-type: none"> Supply and demand factors Expensive Provide only short-term benefits 	5. AVAILABLE SOLUTIONS AS <small>PLUSSES & MINUSES</small> <p>Used K-Medoid clustering and Random Forest classification methods. The image of the leaf is pre-processed in this research, and then the clustering approach is used to locate the impacted area of the leaf. The system detects sickness in the leaf using K-Medoid clustering and the Random Forest algorithm.</p>	Explore AS, differentiate	
	2. PROBLEMS / PAINS + ITS FREQUENCY PR <ul style="list-style-type: none"> Crop choice depending upon the soil in their farmlands Choosing the right fertilizers for their crops, which plays a very important role in getting a good and profitable yield. Pest control or the diseases to which the plants may limit their growth. 				
Focus on PR, tap into BE, understand RC	3. TRIGGERS TO ACT TR <ul style="list-style-type: none"> The particular mixture of nutrients needed; equipment needed The crop, timing of application 	10. YOUR SOLUTION SL <p>Can use SVM to classify tree leaves, identify the disease and suggest the fertilizer. This can be compared with the existing CNN based leaf disease prediction. Then the proposed SVM technique gives a better result when compared to existing CNN.</p>	8. CHANNELS of BEHAVIOR CH <p>The system is capable of generating location-specific fertilizer recommendations for selected crops by analyzing the national soil database developed by this governmental institute.</p>	Focus on PR, tap into BE, understand RC	
Identify strong TR & EM				Extract online & offline CH of BE	