

V.S.B. ENGINEERING COLLEGE, KARUR

Department of Electronics and Communication Engineering

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Project Design Phase-I

Problem Solution Fit

Date	02 October 2022
Team ID	PNT2022TMID33603
Project Name	Fertilizers Recommendation System for Disease Prediction
Maximum Marks	2 Marks

Problem-Solution fit canvas 2.0

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Who is your customer ? <p>Our customers are farmers who are cultivating crops and expecting for more yields.</p>	6. CUSTOMER CONSTRAINTS CC What constraints prevent your customers from taking action or limit their choices of solutions? <p>Some farmers are able to identify the disease with their experience and knowledge and use fertilizers appropriately. So they limit their choices of solution.</p>	5. AVAILABLE SOLUTIONS AS Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? <p>For user convenience, this project is being developed on android applications. So that the customers can easily capture the image of affected leaves and upload it quickly for speedy results. In past, the farmers need to meet the agricultural specialist for this issue and it takes time. Pros : Only less time needed. Quick solution Cons : This app cannot be used to upload images in offline.</p>	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides. <p>Farmers cannot identify the crop disease correctly, so this application is developed in which farmer's upload the images of leaves. When the farmers upload the pictures with low quality, it cannot be processed. So the image should be clear. By processing the clear image, fertilizers can be recommended for the detected disease..</p>	9. PROBLEM ROOT CAUSE RC What is the real reason that this problem exists? What is the back story behind the need to do this job? <p>Now-a-days farmers are struggling to identify the disease on plants by using only the old practices and techniques. So, an AI based automated software is introduced to identify the types of disease and to suggest fertilizer for treating that disease.</p>	7. BEHAVIOUR BE What does your customer do to address the problem and get the job done? <p>Customers get unlimited access to the application. They can upload the images of leaves in it. This approach makes it very simple and detects the disease and suggests fertilizers.</p>	
Focus on J&P, tap into BE, understand RC	3. TRIGGERS TR What triggers customers to act ? <p>Getting recommendation from their friends and neighbours and feedback from existing users.</p>	10. YOUR SOLUTION SL <p>Our system finds the area of the leaf that has been affected and also the disease that attacked the leaves. A system that automatically detects leaf disease with the help of image processing is being developed. This system does few image pre-processing techniques like image acquisition, image segmentation, feature extraction and classification. Modern agricultural practices assure great development of cultivation. We have many smart agriculture developing models to monitor the temperature, humidity, moisture content and spots in leaves that do work automatically but there are few systems that detect problems and provides suggestion to the problem. One such automatic disease detection system is developed for the identification of the disease and recommend appropriate fertilizer.</p>	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE What kind of actions do customers take online? Extract online channels from 7 <p>Customers can upload the images in online and wait for the fertilizers recommendation.</p>	Extract online & offline CH of BE
	4. EMOTIONS: BEFORE / AFTER EM How do customers feel when they face a problem or a job and afterwards? Before : Due to lack of knowledge on crop disease, farmers gains only low yield After : After using the application, by following the fertilizer usage as recommended for the crop disease, farmers can get more yields.	8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from 7 <p>The recommended fertilizer data with correct proposition can be exported as a CSV file and it can be used offline.</p>		

