


Project Design Phase-I Problem – Solution Fit

Date	19 September 2022
Team ID	PNT2022TMID35637
Project Name	Detecting Parkinsons' Disease Using Machine Learning
Maximum Marks	2 Marks

Problem – Solution Fit:

Problem-Solution fit canvas 2.0		Purpose / Vision
Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Who is your customer? i.e. working parents of 0-5 y.o. kids - Senior citizens - People experiencing symptoms of Parkinson's Disease - Medical professionals wanting to perform preliminary tests	6. CUSTOMER CONSTRAINTS CC What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices. - High cost of consulting a neurologist - Lack of accurate test - No access to doctors in remote areas
		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? i.e. pen and paper is an alternative to digital notetaking - Prediction using voice of the person - Prediction using sensors that monitor the movement of the person - Prediction using hand-drawn patterns of the person
Focus on J&P, tap into	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. - Real Time Detection of Parkinson's Disease - Provide highly accurate results - Keep customer's information highly confidential - Spread awareness about the condition	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? i.e. customers have to do it because of the change in regulations. - No high accuracy test in market - Tests are highly expensive - No easy access to test - No easy to use UI is present in the market
		7. BEHAVIOUR BE What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace) - Customer has to give hand-drawn images and voice recording into the application interface to get the prediction - Using the prediction, customers can contact the doctors for further consultations
Identify strong TR & EM	3. TRIGGERS TR People will use the application when they are experiencing symptoms of the disease. For this they need to know about its disease and symptoms through public awareness 4. EMOTIONS: BEFORE / AFTER EM Before: Doubt, Anxious, Stressed After diagnosed with the condition: Fear, Depressed After Diagnosed without the condition: Happiness, Calmness, Peace	10. YOUR SOLUTION SL Our model processes the handwritten patterns using a neural network that predicts whether the person has Parkinson's disease. Not only does it take in the handwritten patterns, it also takes in voice measurements to get more accurate results. A web application is also provided for the user to act as an interactive interface between themselves and our model.
		8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7 Upload input data to the application in order to get the results 8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development. After prediction, customers can take further actions by consulting doctors or going to hospitals for treatment if necessary



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