

Project Design Phase 1

Problem Solution Fit

Date	9 October 2022
Team ID	PNT2022TMID41545
Project Name	CLASSIFICATION OF ARRHYTHMIA BY USING DEEP LEARNING WITH 2-D ECG SPECTRAL IMAGE REPRESENTATION
Maximum Marks	2 Marks

Problem Solution Fit

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Who is your customer? i.e. working parents of 0-5 y.o. kids * An accurate classification of this types could help in diagnosing treatment of heart patient.	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. *An automatic detection of pattern are not attributed to a heart beat detecting cardiac arrhythmia	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 *Research field has been conducted by incorporating different approach of machine learning technique for efficient identification.	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. *The Convolutional technique might not achieve efficient results due to their interpatient variability in ECG signal	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. *The technique presented in the literature applied dataset for purpose of generalization.	7. BEHAVIOUR BE What does your customer do to address the problem and get the job done? (A: directly related: find the right solar panel installer; calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace) *A fully connected later is used between the last polling layer and output layer of CNN	
Focus on J&P, tap into BE, understand RC	3. TRIGGERS TR What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news. *Actual worth of desired quality	10. YOUR SOLUTION SL If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour. *The proposed 2-D CNN model attained better accuracy, sensitivity and specificity observed tha VGG net model	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7 8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development. *A limited data more deeper networks would not quality to perform well within the Scope.	Identify strong TR & EM
	4. EMOTIONS: BEFORE / AFTER EM How do customers feel when they face a problem or a job and afterwards? i.e. lost, insecure > confident, in control - use it in your communication strategy & design. *The Computational resource and simulation time for training and testing.			