

Project Design Phase-I

Problem – Solution Fit Template

Date	16 October 2022
Team ID	PNT2022TMID01315
Project Name	Classification of arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	2 Marks

Problem – Solution Fit Template:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why

Purpose:

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ☐ **Understand the existing situation in order to improve it for your target group.**

De?ne CS, ?t into	1. CUSTOMER SEGMENT(S) CS <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> 1. An arrhythmia patient to know about his arrhythmia type. 2. Health-conscious people and old-aged people to know if they have arrhythmia or not. </div>	6. CUSTOMER CONSTRAINT CC <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> 1. Customer should be able to use laptops or desktops with a network connection. 2. To get their ECG image customers need to rely on other external sources. </div>	5. AVAILABLE SOLUTIONS AS <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> To visit a hospital and consult a doctor frequently to know about their arrhythmia type by spending their time. </div>	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> 1. Get ECG image and identify its type. 2. Provide highly accurate detection of arrhythmia instantly and cheaply. </div>	9. PROBLEM ROOT CAUSE RC <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> Customers find that the traditional way of visiting the hospital and consulting the doctors frequently as a time consuming and expensive process which makes them feel tired. </div>	7. BEHAVIOUR BE <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> Directly related: Find the online web application to classify the type of arrhythmia instantly and accurately. Indirectly related: They need to have the ECG image in the laptop/ desktop. </div>	
Identify strong TR & EM	3. TRIGGERS TR <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> By seeing that other arrhythmia patients get to know about their arrhythmia type instantly without consulting a doctor. </div>	10. YOUR SOLUTION SL <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> To develop a web application that is trained and tested well to get an ECG image as input and shows whether the heartbeat is normal or it belong to any arrhythmia type as output in a secured and accurate manner. </div>	8. CHANNELS of BEHAVIOUR CH <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> Search online for the best arrhythmia classification web application and choose the ECG image file to upload. </div>	Extract online & offline CH of BE
	4. EMOTIONS: BEFORE / AFTER EM <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> Before: Customer find it time consuming and expensive to visit and wait at the hospital and feels exhausted. After: Customer finds it more comfortable, affordable and time saving thus feeling happy. </div>		<div style="border: 1px solid black; padding: 5px; min-height: 40px;"> Customer needed to visit the laboratory or use other devices to get their ECG report and save it as an image file format. </div>	

