

## Project Design Phase-I

### Problem – Solution Fit Template

Date	19 September 2022
Team ID	PNT2022TMID04852
Project Name	Project - 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.**

#### Template:

Define CS, fit into CL	<b>1. CUSTOMER SEGMENT(S)</b> <span style="float: right; background-color: #f0f0f0; padding: 2px;">CS</span> An IT Professional who have arrhythmia but he has no time to go to the hospital for checkup.	<b>6. CUSTOMER LIMITATIONS</b> <small>EG. BUDGET, DEVICES</small> <span style="float: right; background-color: #f0f0f0; padding: 2px;">CL</span> Arrhythmia identification because of several risk factors such as diabetes, age more than 60, high blood pressure, high cholesterol, abnormal heart rate, high alcoholic.	<b>5. AVAILABLE SOLUTIONS</b> <small>PROS &amp; CONS</small> <span style="float: right; background-color: #f0f0f0; padding: 2px;">AS</span> Healthy life cycle such as healthy food habit(low-fat, low-sugar, low-spicy), following regular exercises, following good sleep cycle & stop drinking alcohol.	Explore AS, differentiate
	<b>2. PROBLEMS / PAINS + ITS FREQUENCY</b> <span style="float: right; background-color: #f0f0f0; padding: 2px;">PR</span> Find the type of arrhythmia and help him to get rid from the disease	<b>9. PROBLEM ROOT / CAUSE</b> <span style="float: right; background-color: #f0f0f0; padding: 2px;">RC</span> Risk factors include a poor diet, lack of exercise, obesity, alcohol intake. Healthy lifestyle choices can help lower the risk of arrhythmia.	<b>7. BEHAVIOR + ITS INTENSITY</b> <span style="float: right; background-color: #f0f0f0; padding: 2px;">BE</span> Protect your self from type - 2 diabetes, joint pain, ashtma and number of other chronic diseases and conditions.	
Identify strong TR & EM	<b>3. TRIGGERS TO ACT</b> <span style="float: right; background-color: #f0f0f0; padding: 2px;">TR</span> Symptoms : fluttering in the chest, racing heartbeat (tachycardia), slow heartbeat (bradycardia), anxiety, fatigue, lightheadedness or dizziness, sweating, fainting (syncope) or near fainting.	<b>10. YOUR SOLUTION</b> <span style="float: right; background-color: #f0f0f0; padding: 2px;">SL</span> Eating fatty fish and other foods with omega-3 fatty acids can lower the risk for heart disease and also help prevent arrhythmias. Arrhythmias and other heart conditions are associated with oxidant stress and inflammation. Antioxidants like vitamin C and vitamin E appear to be effective in reducing these. Magnesium and potassium help keep your heart stable.	<b>8. CHANNELS of BEHAVIOR</b> <span style="float: right; background-color: #f0f0f0; padding: 2px;">CH</span> <b>ONLINE</b> Customer will find their arrhythmia contion via online instead of going to the hospitals.	Extract online & offline CH of BE
	<b>4. EMOTIONS</b> <small>BEFORE / AFTER</small> <span style="float: right; background-color: #f0f0f0; padding: 2px;">EM</span> Before : Pesimistic feeling such as anger , stress, hostility, depression, anxiety causes coronary heart diseases. After : Short term feelings like sadness and depression mood for the first few weeks.		<b>OFFLINE</b> Customer has to go to the hospital for collecting their ECG Spectral images.	

## References:

1. <https://www.ideahackers.network/problem-solution-fit-canvas/>
2. <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>
3. <https://app.mural.co/invitation/mural/el1786/1668750259864?sender=u550c8444d76c7c5b928f4748&key=76a6b219-c3ed-4a36-91a9-9c7aa0ad7978>