

## Project Design Phase-I - Solution Fit Template

**Project Title:**

Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

**Team ID:**

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Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> <b>CS</b>  Majorly people with heart disease. Families, work places, schools and colleges. Remote monitoring of a patient's health status. Remote diagnosis and disease prevention. Ability to connect medical devices.	<b>6. CUSTOMER CONSTRAINTS</b> <b>CC</b>  Lack of consistency and interest towards health related apps. Lack of time management for personal and professional life.	<b>5. AVAILABLE SOLUTIONS</b> <b>AS</b>  The detection is quite faster and accurate. There lies no free application for this analysis and this could benefit through prevention (i.e.) insisting for a check-up.	Explore AS, differentiate
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <b>J&amp;P</b>  Reading ECG and prediction of the arrhythmia type. Giving health challenges supporting a healthy and a disease-free heart. Regular check-ups through notifications.	<b>9. PROBLEM ROOT CAUSE</b> <b>RC</b>  The root cause of Arrhythmia is High blood pressure, heart surgery, Thyroid disease, etc which are common in 20 CE people. It is better to prevent through regular check-ups and good lifestyle, than to cure.	<b>7. BEHAVIOUR</b> <b>BE</b>  The customer need to register/ login, scan the ECG or take a photo and upload, the system detects the arrhythmia type, if found. If the result is same for many times, it could give an alert for check-up. Suggests for health challenges.	
	Focus on J&P, tap into BE, understand RC			

<div><div>3. TRIGGERS</div><div>TR</div><div>Challenges flowing through the app trigger the customer for regular usage.</div></div>	<div><div>10. YOUR SOLUTION</div><div>SL</div><div><p>The solution fits medical professionals and also to public to detect arrhythmia accurately through ECG and Deep Learning algorithms.</p><p>The market competition is lower and customer satisfaction could be higher with the enhancements added to the application.</p><p>This ensures a healthier future generation who could balance their lives.</p></div></div>	<div><div>8. CHANNELS of BEHAVIOUR</div><div>CH</div><div><div><div>8.1</div><div>ONLINE</div><div>Logging in, uploading of ECR, prediction of arrhythmia type if predicted.</div></div><div><div>8.2</div><div>OFFLINE</div><div>They would take up heart-related health challenges.</div><div>If predicted with Arrhythmia, go for confirmation with a Cardiologist.</div></div></div></div>
<div><div>4. EMOTIONS: BEFORE / AFTER</div><div>EM</div><div><p>Fear of getting checked for disease, spending to diagnose and time doing all these things.</p><p>Making use of this system can make them relieved and healthier.</p></div></div>		

