**IDEATION PHASE**

**Define the problem statements**

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| --- | --- |
| Date | 05-10-2022 |
| Team ID | PNT2022TMID33209 |
| PROJECT NAME | Classification of arrhythmia by using deep learning with 2-D image spectral representation |
| MAXIMUM MARKS | 2 marks |

**Customer problem statement template:**

**Classification of arrhythmia by using deep learning with 2-D image spectral representation**

The electrocardiogram (ECG) is one of the most extensively employed signals used in the diagnosis and prediction of cardiovascular diseases (CVDs). The ECG signals can capture **the heart’s rhythmic irregularities**, commonly known as **arrhythmia.**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **I am** |   **Patient** | |  | | --- | | **I am trying to** |   **Visit the doctor** | |  | | --- | | **But** |   **Waiting for long time** | |  | | --- | | **Because** |   **More patients visited so I can not** | |  | | --- | | **Which makes me feel** |   **sadness** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Problem statement(ps**) | **I am**  **(customer)** | **I’m trying to** | **But** | Because | Which makes me feel |
| **PS-1** | A Farmer | Take care of my gardens | My heart is hurting | I working too much | Frustated |
| **PS-2** | Patient | Healthy and won’t have heart disease | Sometimes pain my heart | I think I have heart disease | Scared |
| **PS-3** | Parent | Take care about my child | I too weakness | Sometimes heart beat is too fast | Anxious |
| **PS-4** | A football player | Soot goals | I don’t have strength | My aim is distracted sometimes | Sadly |

Proposed solutions

* Electrocardiogram
* Ambulatory monitors
* Tilt table test
* Cardiac catheterization
* Echocardiogram

Benefits of proposed solutions

The proposed model predicts Arrhythmia in images with a high accuracy rate of nearly 96% The early detection of Arrhythmia gives better understanding of disease causes, initiates therapeutic interventions and enables developing appropriate treatments.