Project Design
Phase-1

Proposed Solution

Date	16 October 2022
Team ID	PNT2022TMID16980
Project Name	Classification of Arrhythmia by using deep learning with 2-D ECG Spectral Image Representation
Maximum marks	2 marks

Proposed Solution :

S.NO	PARAMETER	DESCRIPTION
1	Problem Statement	1. The developing application must be very efficient and useful for the user friendly. 2. The agenda of this proposed system is to detect Cardiovascular diseases using the 2-D ECG Spectral image.
2	Idea/solution description	1. This will caution them about the irregular pattern of their heartbeat(Arrhythmia). 2. We are proposing that the automated detection of such pattern to clinical consultation.
3	Novelty/uniqueness	1. Spectrograms(2-D images) are employed which are generated by the 1-D ECG signal using STFT. In addition, data augmentation was used for the 2-D image representation of ECG signals. 2. The method consists of five steps signal processing, generation of spectrograms, augmentation of data, extraction features from the data(using CNN model), classification based on features.
4	Social Impact/Customer Satisfaction	1. The main purpose of this application is to make people awareness on their general health. 2. Can collaborate with doctors and hospitals.
5	Business model	1. By approaching the government to organize awareness camps. 2. By collaborating with diagnosing centers.

6	Scalability of the solution	1. It is very essential for everyone to keep a track on individuals health. 2. It helps in monitoring one's health.