Ideation Phase

Date	19 September 2022
Team ID	PNT2022TMID00351
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	2 Marks

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

According to the World Health Organization (WHO), cardiovascular diseases (CVDs) are the number one cause of death today. It is statistically observed that over 17.7 million people died from CVDs in the year 2017 all over the world which is about 31% of all deaths. All of these could be prevented if it's predicted early. Our body always emits out signs when internal system malfunctions. So, classifying irregular heartbeat termed as arrhythmia is the need of hour. Broadly there are two types of arrhythmias such as atrial and ventricular arrhythmia specifying it's region of origination. These are further subdivided into many types. Some sound similar to normal heartbeats so we must devise a method that could predict these abnormalities with absolute accuracy. A method to convert 1-D ECG to 2-D spectral images for being processed by Deep learning classification algorithm to predict the presence of abnormality as well as the type of arrhythmia in minimal amount of time yet yielding absolutely accurate results for large sized data sets has to be developed by considering following point kept in check.