IDEATION PHASE

PROBLEM STATEMENT

Date	19 September 2022
Team ID	PNT2022TMID16055
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	2 Marks

Whom does the problem affect?	People who are affected by cardiovascular diseases are primarily from village areas
What are the boundaries of the problem?	People who are aged (35-60)and majorly over 50
What is the issue?	An unhealthy diet, physical inactivity, tobacco use, and harmful alcohol use are the most important behavioral risk factors for heart disease and stroke. The effects of behavioral risk factors may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids, and overweight or obesity.
When does the issue occur?	During the age excess of over 50, it can happen at any age. High rates of obesity and high blood pressure among younger people (ages 35–64) are putting them at risk for heart disease earlier in life.
Where is the issue coming from?	It is caused primarily by high blood pressure, high LDL cholesterol, diabetes, smoking, and secondhand smoke exposure, obesity, an unhealthy diet, and physical inactivity.
Why is it important that we fix the problem?	It is very crucial to develop an application that detects the disease at a good prediction rate so that it helps to get a clear line of disease symptoms during the time.

Which solution can beused to address this issue?	We built an effective ECG arrhythmia classification method using a convolutional neural network (CNN), Web application where the user selects the image that is to be classified. The image is fed into the model that is being trained, and the cited class will be displayed on the webpage.
What methodology was used to solve the issue?	Python, CNN, IBM Cloud, IBM Watson Studio, IBM Cloudant DB, Deep Learning, Python-Flask.