# Classification Of Arrhythmia By Using Deep Learning With 2-D ECG Spectral Image Representation

## MODEL BUILDING

#### IMPORTING THE MODEL BUILDING LIBRARIES

| Team ID      | PNT2022TMID52395                                    |
|--------------|---|
| Project Name | Classification Of Arrhythmia By Using Deep Learning |
|              | With 2-D ECG Spectral Image Representation          |

#### IMPORTING THE MODEL BUILDING LIBRARIES:

Import the libraries that are required to initialize the neural network layer, create and add different layers to the neural network model. The below libraries are imported and executed.

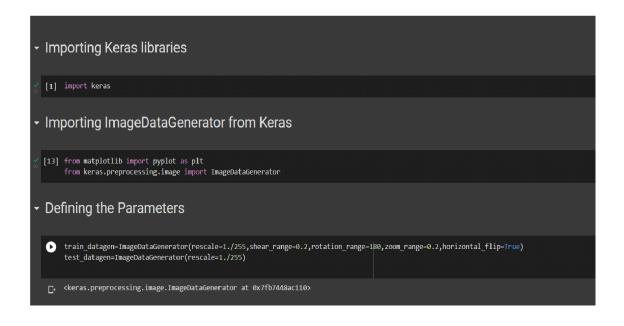
11/7/22, 12:35 AM Untitled8.ipynb - Colaboratory

Importing Keras libraries

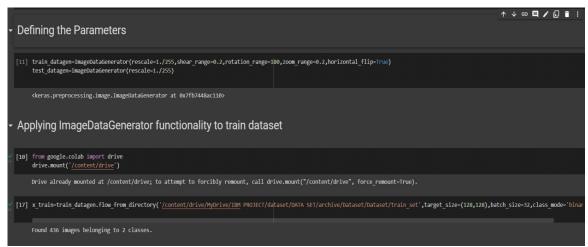
import keras

Importing ImageDataGenerator from Keras

from keras.preprocessing.image import ImageDataGenerator



# **APPLYING ImageDataGenerator to train dataset:**



plyflow\_from\_directory ( )methodfor Train folder.

# APPLYING ImageDataGenerator to test dataset:

Applying the **flow\_from\_directory** ( ) methodfortest folder.

| Applying ImageDataGenerator functionality to test dataset |   |   |  |
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|   |   | ↑ ♥ ♥ <b>□ ‡</b> 🖟 i  |  |
| 1   | 0 | x test=test datagen.flow from directory('/content/drive/MyDrive/IBM PROJECT/dataset/DATA SET/archive/Dataset/Dataset/test_set', target_size=(128,128), batch_size=32,class_mode='binary') |  |
|   |   |   |  |
|   |   |   |  |
|   | D | Found 121 images belonging to 2 classes.  |  |
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## **IMPORTING MODEL BUILDING LIBRARIES:**

11/8/22, 1:16 AM

Main code - Colaboratory

Importing Model Building Libraries

```
#to define the linear Initialisation import sequential
from keras.models import Sequential
#to add layers import Dense
from keras.layers import Dense
#to create Convolutional kernel import convolution2D
from keras.layers import Convolution2D
#import Maxpooling layer
from keras.layers import MaxPooling2D
#import flatten layer
from keras.layers import Flatten
import warnings
warnings.filterwarnings('ignore')
```