PROJECT DEVELOPMENT PHASE

SPRINT- II

Team ID	PNT2022TMID03100
Project Name	Project - Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

Import The Libraries

```
[ ] from tensorflow.keras.models import Sequential
    from tensorflow.keras.layers import Convolution2D
    from tensorflow.keras.layers import MaxPooling2D
    from tensorflow.keras.layers import Flatten
    from tensorflow.keras.layers import Dense
```

MODEL BUILDING

Initializing the Model

```
[ ] model = Sequential()
```

Adding CNN Layers

```
[ ] model.add(Convolution2D(32, (3,3), input_shape = (64,64,3), activation = "relu"))

[ ] model.add(MaxPooling2D(pool_size = (2,2)))

[ ] model.add(Convolution2D(32, (3,3), activation = "relu"))

[ ] model.add(MaxPooling2D(pool_size = (2,2)))

[ ] model.add(Flatten())
```

Adding Dense Layers

```
[ ] model.add(Dense(units=128, kernel_initializer='random_uniform', activation="relu"))

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[ ] model.add(Dense(units=128, kernel_initializer='random_uniform', activation="relu"))

[ ] model.add(Dense(units=6, kernel_initializer='random_uniform', activation="softmax"))
```

Configure the Learning Process

```
[ ]  model.summary()
```

```
Model: "sequential"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 conv2d (Conv2D)             (None, 62, 62, 32)        896

 max_pooling2d (MaxPooling2D  (None, 31, 31, 32)       0
 )

 conv2d_1 (Conv2D)           (None, 29, 29, 32)        9248

 max_pooling2d_1 (MaxPooling  (None, 14, 14, 32)       0
 2D)

 flatten (Flatten)           (None, 6272)              0

 dense (Dense)               (None, 128)               802944

 dense_1 (Dense)             (None, 128)               16512

 dense_2 (Dense)             (None, 128)               16512

 dense_3 (Dense)             (None, 128)               16512

 dense_4 (Dense)             (None, 128)               16512

 dense_5 (Dense)             (None, 6)                 774

=================================================================
Total params: 879,910
Trainable params: 879,910
Non-trainable params: 0
_________________________________________________________________
```