

Team id	PNT2022TMID00594
Project name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

## Accuracy Screenshot

```

Train the model

model.fit(x_train,epochs=5,steps_per_epoch=len(x_train),validation_data=x_test,validation_steps=len(x_test))

Epoch 1/5
120/120 [=====] - 5756s 48s/step - loss: 1.6898 - accuracy: 0.4805 - val_loss: 1.3704 - val_accuracy: 0.4504
Epoch 2/5
120/120 [=====] - 125s 1s/step - loss: 0.8183 - accuracy: 0.7325 - val_loss: 0.9316 - val_accuracy: 0.6563
Epoch 3/5
120/120 [=====] - 128s 1s/step - loss: 0.5143 - accuracy: 0.8348 - val_loss: 0.6283 - val_accuracy: 0.7804
Epoch 4/5
120/120 [=====] - 128s 1s/step - loss: 0.3506 - accuracy: 0.8883 - val_loss: 0.6324 - val_accuracy: 0.8358
Epoch 5/5
120/120 [=====] - 124s 1s/step - loss: 0.2488 - accuracy: 0.9226 - val_loss: 0.5860 - val_accuracy: 0.8522
<keras.callbacks.History at 0x7f528299c410>

[ ] model.fit(x_train,epochs=5,steps_per_epoch=len(x_train),validation_data=x_test,validation_steps=len(x_test))

Epoch 1/5
120/120 [=====] - 140s 1s/step - loss: 0.1920 - accuracy: 0.9401 - val_loss: 0.4968 - val_accuracy: 0.8731
Epoch 2/5
120/120 [=====] - 147s 1s/step - loss: 0.1607 - accuracy: 0.9512 - val_loss: 0.5703 - val_accuracy: 0.8727
Epoch 3/5
120/120 [=====] - 142s 1s/step - loss: 0.1358 - accuracy: 0.9572 - val_loss: 0.4914 - val_accuracy: 0.8831
Epoch 4/5
120/120 [=====] - 140s 1s/step - loss: 0.1181 - accuracy: 0.9640 - val_loss: 0.5450 - val_accuracy: 0.8794
Epoch 5/5
120/120 [=====] - 133s 1s/step - loss: 0.1109 - accuracy: 0.9666 - val_loss: 0.4703 - val_accuracy: 0.8801
<keras.callbacks.History at 0x7f527adbd750>

```

## Summary screenshot

```

[ ] model.summary()

Model: "sequential"

Layer (type)                 Output Shape              Param #
=====
conv2d (Conv2D)              (None, 62, 62, 32)       896

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

flatten (Flatten)            (None, 30752)            0

=====
Total params: 896
Trainable params: 896
Non-trainable params: 0

```

