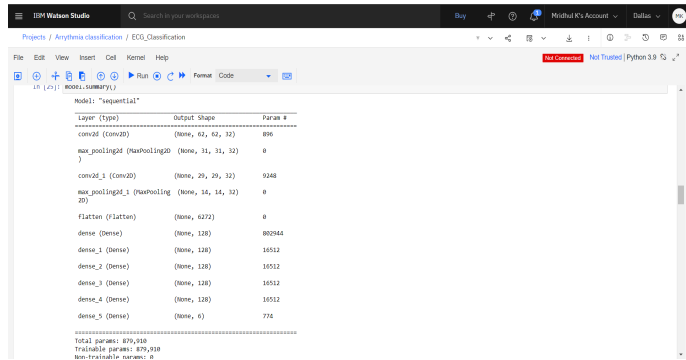
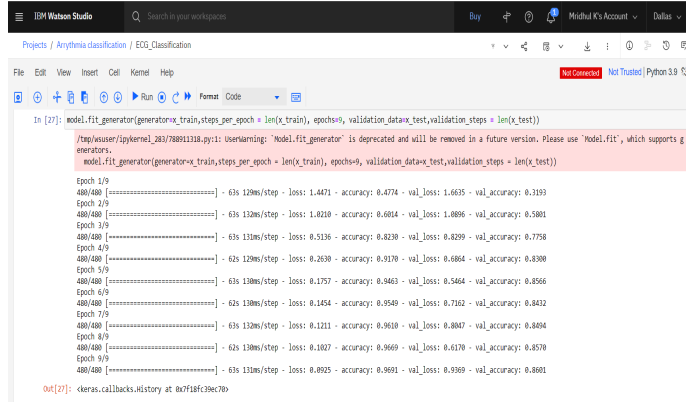


## Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID52879
Project Name	Classification Of Arrhythmia By Using Deep Learning With 2-D ECG Spectral Image Representation
Maximum Marks	10 Marks

### Model Performance Testing:

S.N o.	Parameter	Values	Screenshot
1.	Model Summary	-	 <pre> 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 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: 879,918 Trainable params: 879,918 Non-trainable params: 0 </pre>
2.	Accuracy	Training Accuracy - 96.91% Validation Accuracy - 86.01%	 <pre> In [27]: model.fit_generator(generator_x_train, steps_per_epoch = len(x_train), epochs=9, validation_data=x_test, validation_steps = len(x_test))  Epoch 1/9 480/480 [=====] - 63s 129ms/step - loss: 1.4471 - accuracy: 0.4774 - val_loss: 1.6635 - val_accuracy: 0.3193 Epoch 2/9 480/480 [=====] - 63s 130ms/step - loss: 1.0210 - accuracy: 0.6804 - val_loss: 1.8896 - val_accuracy: 0.5881 Epoch 3/9 480/480 [=====] - 63s 130ms/step - loss: 0.5136 - accuracy: 0.8239 - val_loss: 0.8299 - val_accuracy: 0.7758 Epoch 4/9 480/480 [=====] - 62s 129ms/step - loss: 0.2639 - accuracy: 0.9179 - val_loss: 0.6864 - val_accuracy: 0.8380 Epoch 5/9 480/480 [=====] - 63s 130ms/step - loss: 0.1757 - accuracy: 0.9463 - val_loss: 0.5464 - val_accuracy: 0.8566 Epoch 6/9 480/480 [=====] - 62s 130ms/step - loss: 0.1454 - accuracy: 0.9549 - val_loss: 0.7162 - val_accuracy: 0.8432 Epoch 7/9 480/480 [=====] - 63s 130ms/step - loss: 0.1211 - accuracy: 0.9610 - val_loss: 0.8047 - val_accuracy: 0.8404 Epoch 8/9 480/480 [=====] - 62s 130ms/step - loss: 0.1027 - accuracy: 0.9669 - val_loss: 0.6170 - val_accuracy: 0.8570 Epoch 9/9 480/480 [=====] - 63s 130ms/step - loss: 0.0925 - accuracy: 0.9691 - val_loss: 0.5969 - val_accuracy: 0.8601  Out[27]: &lt;keras.callbacks.History at 0x718fc39c70&gt; </pre>