Project Development Phase
Model Performance Test

Date	12 November 2022
Team ID	PNT2022TMID51961
Project Name	A GESTURE BASED TOOL FOR STERILE BROWSING OF RADIOLOGY IMAGES
Maximum Marks	10 Marks

Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Model Summary	-	

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Model: "sequential"
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 Layer (type)                Output Shape              Param #
=================================================================
 batch_normalization (BatchN  (None, 128, 128, 1)      4
 ormalization)

 conv2d (Conv2D)             (None, 126, 126, 32)      320

 max_pooling2d (MaxPooling2D  (None, 63, 63, 32)       0
 )

 conv2d_1 (Conv2D)           (None, 63, 63, 6)         3078

 max_pooling2d_1 (MaxPooling  (None, 31, 31, 6)        0
 2D)

 conv2d_2 (Conv2D)           (None, 31, 31, 128)       7040

 max_pooling2d_2 (MaxPooling  (None, 15, 15, 128)      0
 2D)

 conv2d_3 (Conv2D)           (None, 15, 15, 128)       65664

 max_pooling2d_3 (MaxPooling  (None, 7, 7, 128)        0
 2D)

 flatten (Flatten)           (None, 6272)              0

 dense (Dense)               (None, 128)               802944

 dense_1 (Dense)             (None, 64)                8256

 dense_2 (Dense)             (None, 32)                2080

 dense_3 (Dense)             (None, 6)                 198

=================================================================
Total params: 889,584
Trainable params: 889,582
Non-trainable params: 2
```

2.	Accuracy	Training Accuracy – 99.92% Validation Accuracy – 99.86%	Epoch 1/20 562/562 [==========] - 308s 546ms/step - loss: 0.2178 - accuracy: 0.9182 - val_loss: 0.0014 - val_accuracy: 1.0000 Epoch 2/20 562/562 [==========] - 306s 545ms/step - loss: 0.0386 - accuracy: 0.9880 - val_loss: 0.0068 - val_accuracy: 0.9978 Epoch 3/20 562/562 [==========] - 299s 532ms/step - loss: 0.0192 - accuracy: 0.9948 - val_loss: 7.7184e-04 - val_accuracy: 1.0000 Epoch 4/20 562/562 [==========] - 306s 545ms/step - loss: 0.0137 - accuracy: 0.9960 - val_loss: 0.0032 - val_accuracy: 0.9983 Epoch 5/20 562/562 [==========] - 310s 552ms/step - loss: 0.0184 - accuracy: 0.9940 - val_loss: 5.2546e-04 - val_accuracy: 1.0000 Epoch 6/20 562/562 [==========] - 312s 556ms/step - loss: 0.0150 - accuracy: 0.9949 - val_loss: 1.4421e-05 - val_accuracy: 1.0000 Epoch 7/20 562/562 [==========] - 304s 541ms/step - loss: 0.0073 - accuracy: 0.9978 - val_loss: 0.0120 - val_accuracy: 0.9967 Epoch 8/20 562/562 [==========] - 309s 550ms/step - loss: 0.0111 - accuracy: 0.9966 - val_loss: 0.0011 - val_accuracy: 0.9994 Epoch 9/20 562/562 [==========] - 313s 556ms/step - loss: 0.0067 - accuracy: 0.9982 - val_loss: 2.7600e-05 - val_accuracy: 1.0000 Epoch 10/20 562/562 [==========] - 311s 553ms/step - loss: 0.0124 - accuracy: 0.9962 - val_loss: 4.3617e-04 - val_accuracy: 1.0000 Epoch 11/20 562/562 [==========] - 311s 552ms/step - loss: 0.0071 - accuracy: 0.9978 - val_loss: 2.4401e-04 - val_accuracy: 1.0000 Epoch 12/20 562/562 [==========] - 310s 552ms/step - loss: 0.0035 - accuracy: 0.9992 - val_loss: 0.0021 - val_accuracy: 0.9989 Epoch 13/20 562/562 [==========] - 303s 539ms/step - loss: 0.0090 - accuracy: 0.9975 - val_loss: 0.0017 - val_accuracy: 1.0000 Epoch 14/20 562/562 [==========] - 299s 533ms/step - loss: 0.0082 - accuracy: 0.9976 - val_loss: 1.9254e-05 - val_accuracy: 1.0000 Epoch 15/20 562/562 [==========] - 308s 549ms/step - loss: 0.0072 - accuracy: 0.9982 - val_loss: 1.5410e-04 - val_accuracy: 1.0000 Epoch 16/20 562/562 [==========] - 307s 545ms/step - loss: 0.0078 - accuracy: 0.9974 - val_loss: 1.8354e-04 - val_accuracy: 1.0000 Epoch 17/20 562/562 [==========] - 306s 545ms/step - loss: 0.0020 - accuracy: 0.9996 - val_loss: 1.1681e-05 - val_accuracy: 1.0000 Epoch 18/20 562/562 [==========] - 307s 546ms/step - loss: 0.0074 - accuracy: 0.9981 - val_loss: 1.8610e-04 - val_accuracy: 1.0000 Epoch 19/20 562/562 [==========] - 300s 534ms/step - loss: 0.0051 - accuracy: 0.9986 - val_loss: 1.1064e-04 - val_accuracy: 1.0000 Epoch 20/20 562/562 [==========] - 304s 540ms/step - loss: 0.0026 - accuracy: 0.9992 - val_loss: 0.0037 - val_accuracy: 0.9986