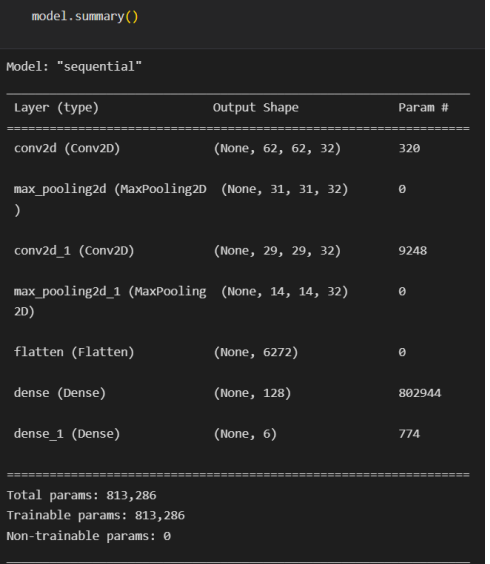
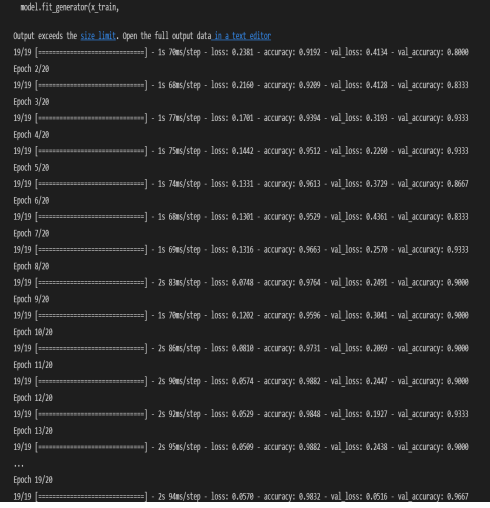


Project Development Phase Model Performance Test

Date	17 November 2022
Team ID	PNT2022TMID28589
Project Name	Project - A Gesture-based Tool for Sterile Browsing of Radiology Images
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	<p>Total params: 813,286 Trainable params: 813,286 Non-trainable params: 0</p>	 <pre> model.summary() Model: "sequential" Layer (type) Output Shape Param # ----- conv2d (Conv2D) (None, 62, 62, 32) 320 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, 6) 774 ----- Total params: 813,286 Trainable params: 813,286 Non-trainable params: 0 </pre>
2.	Accuracy	<p>Training Accuracy – 99.16%</p> <p>Validation Accuracy – 96.67 %</p>	 <pre> model.fit_generator(x_train, Output exceeds the size limit. Open the full output data in a text editor 15/19 [=====] - 1s 70ms/step - loss: 0.2381 - accuracy: 0.9192 - val_loss: 0.4134 - val_accuracy: 0.8808 Epoch 2/20 15/19 [=====] - 1s 68ms/step - loss: 0.2158 - accuracy: 0.9209 - val_loss: 0.4128 - val_accuracy: 0.8333 Epoch 3/20 15/19 [=====] - 1s 77ms/step - loss: 0.1701 - accuracy: 0.9394 - val_loss: 0.3193 - val_accuracy: 0.9333 Epoch 4/20 15/19 [=====] - 1s 79ms/step - loss: 0.1442 - accuracy: 0.9512 - val_loss: 0.2260 - val_accuracy: 0.9333 Epoch 5/20 15/19 [=====] - 1s 74ms/step - loss: 0.1331 - accuracy: 0.9613 - val_loss: 0.3729 - val_accuracy: 0.8667 Epoch 6/20 15/19 [=====] - 1s 68ms/step - loss: 0.1301 - accuracy: 0.9529 - val_loss: 0.4381 - val_accuracy: 0.8333 Epoch 7/20 15/19 [=====] - 1s 69ms/step - loss: 0.1316 - accuracy: 0.9663 - val_loss: 0.2570 - val_accuracy: 0.9333 Epoch 8/20 15/19 [=====] - 1s 83ms/step - loss: 0.0748 - accuracy: 0.9764 - val_loss: 0.2491 - val_accuracy: 0.9000 Epoch 9/20 15/19 [=====] - 1s 70ms/step - loss: 0.1302 - accuracy: 0.9596 - val_loss: 0.3041 - val_accuracy: 0.9000 Epoch 10/20 15/19 [=====] - 1s 86ms/step - loss: 0.0818 - accuracy: 0.9731 - val_loss: 0.2069 - val_accuracy: 0.9000 Epoch 11/20 15/19 [=====] - 1s 90ms/step - loss: 0.0574 - accuracy: 0.9882 - val_loss: 0.2447 - val_accuracy: 0.9000 Epoch 12/20 15/19 [=====] - 1s 92ms/step - loss: 0.0529 - accuracy: 0.9848 - val_loss: 0.1927 - val_accuracy: 0.9333 Epoch 13/20 15/19 [=====] - 1s 95ms/step - loss: 0.0509 - accuracy: 0.9882 - val_loss: 0.2438 - val_accuracy: 0.9000 ... Epoch 15/20 15/19 [=====] - 1s 94ms/step - loss: 0.0578 - accuracy: 0.9832 - val_loss: 0.0510 - val_accuracy: 0.9667 </pre>

1.MODEL SUMMARY:

```
model.summary()
```

Model: "sequential"

Layer (type)	Output Shape	Param #
=====		
conv2d (Conv2D)	(None, 62, 62, 32)	320
max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0
conv2d_1 (Conv2D)	(None, 29, 29, 32)	9248
max_pooling2d_1 (MaxPooling2D)	(None, 14, 14, 32)	0
flatten (Flatten)	(None, 6272)	0
dense (Dense)	(None, 128)	802944
dense_1 (Dense)	(None, 6)	774

=====

Total params: 813,286

Trainable params: 813,286

Non-trainable params: 0

2.ACCURACY:

```
model.fit_generator(x_train,
```

Output exceeds the [size limit](#). Open the full output data [in a text editor](#)

```
19/19 [=====] - 1s 70ms/step - loss: 0.2381 - accuracy: 0.9192 - val_loss: 0.4134 - val_accuracy: 0.8000
Epoch 2/20
19/19 [=====] - 1s 68ms/step - loss: 0.2160 - accuracy: 0.9209 - val_loss: 0.4128 - val_accuracy: 0.8333
Epoch 3/20
19/19 [=====] - 1s 77ms/step - loss: 0.1701 - accuracy: 0.9394 - val_loss: 0.3193 - val_accuracy: 0.9333
Epoch 4/20
19/19 [=====] - 1s 75ms/step - loss: 0.1442 - accuracy: 0.9512 - val_loss: 0.2260 - val_accuracy: 0.9333
Epoch 5/20
19/19 [=====] - 1s 74ms/step - loss: 0.1331 - accuracy: 0.9613 - val_loss: 0.3729 - val_accuracy: 0.8667
Epoch 6/20
19/19 [=====] - 1s 68ms/step - loss: 0.1301 - accuracy: 0.9529 - val_loss: 0.4361 - val_accuracy: 0.8333
Epoch 7/20
19/19 [=====] - 1s 69ms/step - loss: 0.1316 - accuracy: 0.9663 - val_loss: 0.2570 - val_accuracy: 0.9333
Epoch 8/20
19/19 [=====] - 2s 83ms/step - loss: 0.0748 - accuracy: 0.9764 - val_loss: 0.2491 - val_accuracy: 0.9000
Epoch 9/20
19/19 [=====] - 1s 70ms/step - loss: 0.1202 - accuracy: 0.9596 - val_loss: 0.3041 - val_accuracy: 0.9000
Epoch 10/20
19/19 [=====] - 2s 86ms/step - loss: 0.0810 - accuracy: 0.9731 - val_loss: 0.2069 - val_accuracy: 0.9000
Epoch 11/20
19/19 [=====] - 2s 90ms/step - loss: 0.0574 - accuracy: 0.9882 - val_loss: 0.2447 - val_accuracy: 0.9000
Epoch 12/20
19/19 [=====] - 2s 92ms/step - loss: 0.0529 - accuracy: 0.9848 - val_loss: 0.1927 - val_accuracy: 0.9333
Epoch 13/20
19/19 [=====] - 2s 95ms/step - loss: 0.0509 - accuracy: 0.9882 - val_loss: 0.2438 - val_accuracy: 0.9000
...
Epoch 19/20
19/19 [=====] - 2s 94ms/step - loss: 0.0570 - accuracy: 0.9832 - val_loss: 0.0516 - val_accuracy: 0.9667
```