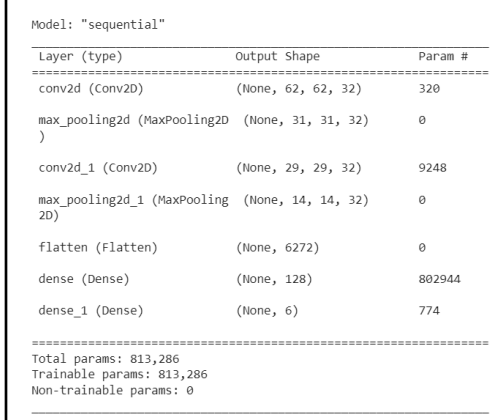
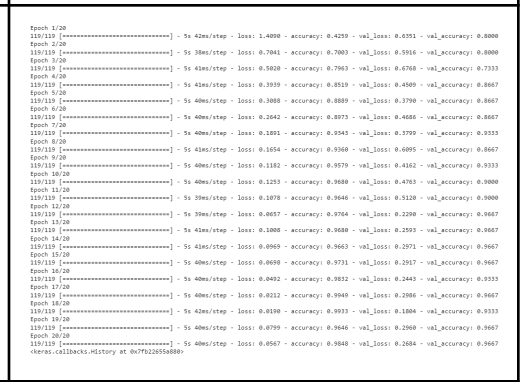
Project Development Phase
Performance Testing

Date	18 November 2022
Team ID	PNT2022TMID53060
Project Name	Project - A Gesture-based Tool for Sterile Browsing of Radiology Images
Maximum Marks	4 Marks

Model Performace Testing:

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

S. No.	Parameter	Values	Screenshot
1	Model Summary	conv2d (Conv2D) - 320 max_pooling2d - 0 conv2d_1 (Conv2D) - 9248 max_pooling2d_1 - 0 flatten (Flatten) - 0 dense (Dense) - 802944 dense_1 (Dense) - 774 ========== Total params: 813,286 Trainable params: 813,286 Non-trainable params: 0	
2	Accuracy	Training accuracy: 98.48% Validation accuracy: 96.67%	
3	Confidence Score	Class Detected - N/A Confidence Score - N/A	N/A

Screenshots:

1. Model Summary

```
classifier.summary()
```

```
Model: "sequential"
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 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
_________________________________________________________________
```

2. Accuracy

```
Epoch 1/20
119/119 [==============================] - 5s 42ms/step - loss: 1.4090 - accuracy: 0.4259 - val_loss: 0.6351 - val_accuracy: 0.8000
Epoch 2/20
119/119 [==============================] - 5s 38ms/step - loss: 0.7041 - accuracy: 0.7003 - val_loss: 0.5916 - val_accuracy: 0.8000
Epoch 3/20
119/119 [==============================] - 5s 41ms/step - loss: 0.5020 - accuracy: 0.7963 - val_loss: 0.6768 - val_accuracy: 0.7333
Epoch 4/20
119/119 [==============================] - 5s 41ms/step - loss: 0.3939 - accuracy: 0.8519 - val_loss: 0.4509 - val_accuracy: 0.8667
Epoch 5/20
119/119 [==============================] - 5s 40ms/step - loss: 0.3088 - accuracy: 0.8889 - val_loss: 0.3790 - val_accuracy: 0.8667
Epoch 6/20
119/119 [==============================] - 5s 40ms/step - loss: 0.2642 - accuracy: 0.8973 - val_loss: 0.4686 - val_accuracy: 0.8667
Epoch 7/20
119/119 [==============================] - 5s 40ms/step - loss: 0.1891 - accuracy: 0.9343 - val_loss: 0.3799 - val_accuracy: 0.9333
Epoch 8/20
119/119 [==============================] - 5s 41ms/step - loss: 0.1654 - accuracy: 0.9360 - val_loss: 0.6095 - val_accuracy: 0.8667
Epoch 9/20
119/119 [==============================] - 5s 40ms/step - loss: 0.1182 - accuracy: 0.9579 - val_loss: 0.4162 - val_accuracy: 0.9333
Epoch 10/20
119/119 [==============================] - 5s 40ms/step - loss: 0.1253 - accuracy: 0.9680 - val_loss: 0.4763 - val_accuracy: 0.9000
Epoch 11/20
119/119 [==============================] - 5s 39ms/step - loss: 0.1078 - accuracy: 0.9646 - val_loss: 0.5120 - val_accuracy: 0.9000
Epoch 12/20
119/119 [==============================] - 5s 39ms/step - loss: 0.0657 - accuracy: 0.9764 - val_loss: 0.2290 - val_accuracy: 0.9667
Epoch 13/20
119/119 [==============================] - 5s 41ms/step - loss: 0.1008 - accuracy: 0.9680 - val_loss: 0.2593 - val_accuracy: 0.9667
Epoch 14/20
119/119 [==============================] - 5s 41ms/step - loss: 0.0969 - accuracy: 0.9663 - val_loss: 0.2971 - val_accuracy: 0.9667
Epoch 15/20
119/119 [==============================] - 5s 40ms/step - loss: 0.0698 - accuracy: 0.9731 - val_loss: 0.2917 - val_accuracy: 0.9667
Epoch 16/20
119/119 [==============================] - 5s 40ms/step - loss: 0.0492 - accuracy: 0.9832 - val_loss: 0.2443 - val_accuracy: 0.9333
Epoch 17/20
119/119 [==============================] - 5s 40ms/step - loss: 0.0212 - accuracy: 0.9949 - val_loss: 0.2986 - val_accuracy: 0.9667
Epoch 18/20
119/119 [==============================] - 5s 42ms/step - loss: 0.0190 - accuracy: 0.9933 - val_loss: 0.1804 - val_accuracy: 0.9333
Epoch 19/20
119/119 [==============================] - 5s 40ms/step - loss: 0.0799 - accuracy: 0.9646 - val_loss: 0.2960 - val_accuracy: 0.9667
Epoch 20/20
119/119 [==============================] - 5s 40ms/step - loss: 0.0567 - accuracy: 0.9848 - val_loss: 0.2684 - val_accuracy: 0.9667
<keras.callbacks.History at 0x7fb22655a880>
```