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Layer (type) Output Shape Param #

=================================================================

input\_6 (InputLayer) [(None, 224, 224, 3)] 0

block1\_conv1 (Conv2D) (None, 224, 224, 64) 1792

block1\_conv2 (Conv2D) (None, 224, 224, 64) 36928

block1\_pool (MaxPooling2D) (None, 112, 112, 64) 0

block2\_conv1 (Conv2D) (None, 112, 112, 128) 73856

block2\_conv2 (Conv2D) (None, 112, 112, 128) 147584

block2\_pool (MaxPooling2D) (None, 56, 56, 128) 0

block3\_conv1 (Conv2D) (None, 56, 56, 256) 295168

block3\_conv2 (Conv2D) (None, 56, 56, 256) 590080

block3\_conv3 (Conv2D) (None, 56, 56, 256) 590080

block3\_pool (MaxPooling2D) (None, 28, 28, 256) 0

block4\_conv1 (Conv2D) (None, 28, 28, 512) 1180160

block4\_conv2 (Conv2D) (None, 28, 28, 512) 2359808

block4\_conv3 (Conv2D) (None, 28, 28, 512) 2359808

block4\_pool (MaxPooling2D) (None, 14, 14, 512) 0

block5\_conv1 (Conv2D) (None, 14, 14, 512) 2359808

block5\_conv2 (Conv2D) (None, 14, 14, 512) 2359808

block5\_conv3 (Conv2D) (None, 14, 14, 512) 2359808

block5\_pool (MaxPooling2D) (None, 7, 7, 512) 0

flatten\_2 (Flatten) (None, 25088) 0

dense\_2 (Dense) (None, 1) 25089

=================================================================

Total params: 14,739,777

Trainable params: 25,089

Non-trainable params: 14,714,688

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Epoch 1/100

44/44 [==============================] - 13s 276ms/step - loss: 0.5429 - accuracy: 0.7257 - val\_loss: 0.3097 - val\_accuracy: 0.8473 - lr: 0.0010

Epoch 2/100

44/44 [==============================] - 12s 266ms/step - loss: 0.2649 - accuracy: 0.9100 - val\_loss: 0.2240 - val\_accuracy: 0.9164 - lr: 0.0010

Epoch 3/100

44/44 [==============================] - 12s 270ms/step - loss: 0.1806 - accuracy: 0.9474 - val\_loss: 0.2155 - val\_accuracy: 0.9135 - lr: 0.0010

Epoch 4/100

44/44 [==============================] - 12s 267ms/step - loss: 0.1369 - accuracy: 0.9676 - val\_loss: 0.1661 - val\_accuracy: 0.9424 - lr: 0.0010

Epoch 5/100

44/44 [==============================] - 12s 267ms/step - loss: 0.1089 - accuracy: 0.9827 - val\_loss: 0.1476 - val\_accuracy: 0.9481 - lr: 0.0010

Epoch 6/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0936 - accuracy: 0.9827 - val\_loss: 0.1457 - val\_accuracy: 0.9452 - lr: 0.0010

Epoch 7/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0754 - accuracy: 0.9906 - val\_loss: 0.1312 - val\_accuracy: 0.9568 - lr: 0.0010

Epoch 8/100

44/44 [==============================] - 12s 267ms/step - loss: 0.0604 - accuracy: 0.9964 - val\_loss: 0.1388 - val\_accuracy: 0.9452 - lr: 0.0010

Epoch 9/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0547 - accuracy: 0.9964 - val\_loss: 0.1120 - val\_accuracy: 0.9654 - lr: 0.0010

Epoch 10/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0441 - accuracy: 0.9978 - val\_loss: 0.1057 - val\_accuracy: 0.9683 - lr: 0.0010

Epoch 11/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0390 - accuracy: 0.9986 - val\_loss: 0.1033 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 12/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0337 - accuracy: 1.0000 - val\_loss: 0.0990 - val\_accuracy: 0.9683 - lr: 0.0010

Epoch 13/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0325 - accuracy: 0.9993 - val\_loss: 0.0983 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 14/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0273 - accuracy: 1.0000 - val\_loss: 0.0941 - val\_accuracy: 0.9683 - lr: 0.0010

Epoch 15/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0248 - accuracy: 1.0000 - val\_loss: 0.0909 - val\_accuracy: 0.9683 - lr: 0.0010

Epoch 16/100

44/44 [==============================] - 12s 273ms/step - loss: 0.0219 - accuracy: 1.0000 - val\_loss: 0.0892 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 17/100

44/44 [==============================] - 12s 271ms/step - loss: 0.0211 - accuracy: 1.0000 - val\_loss: 0.0900 - val\_accuracy: 0.9683 - lr: 0.0010

Epoch 18/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0188 - accuracy: 1.0000 - val\_loss: 0.0882 - val\_accuracy: 0.9683 - lr: 0.0010

Epoch 19/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0172 - accuracy: 1.0000 - val\_loss: 0.0854 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 20/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0156 - accuracy: 1.0000 - val\_loss: 0.0885 - val\_accuracy: 0.9798 - lr: 0.0010

Epoch 21/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0141 - accuracy: 1.0000 - val\_loss: 0.0825 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 22/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0136 - accuracy: 1.0000 - val\_loss: 0.0852 - val\_accuracy: 0.9683 - lr: 0.0010

Epoch 23/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0127 - accuracy: 1.0000 - val\_loss: 0.0838 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 24/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0114 - accuracy: 1.0000 - val\_loss: 0.0795 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 25/100

44/44 [==============================] - 12s 272ms/step - loss: 0.0110 - accuracy: 1.0000 - val\_loss: 0.0775 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 26/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0101 - accuracy: 1.0000 - val\_loss: 0.0770 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 27/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0095 - accuracy: 1.0000 - val\_loss: 0.0770 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 28/100

44/44 [==============================] - 12s 271ms/step - loss: 0.0091 - accuracy: 1.0000 - val\_loss: 0.0767 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 29/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0084 - accuracy: 1.0000 - val\_loss: 0.0777 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 30/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0080 - accuracy: 1.0000 - val\_loss: 0.0770 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 31/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0074 - accuracy: 1.0000 - val\_loss: 0.0747 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 32/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0072 - accuracy: 1.0000 - val\_loss: 0.0742 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 33/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0068 - accuracy: 1.0000 - val\_loss: 0.0744 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 34/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0066 - accuracy: 1.0000 - val\_loss: 0.0753 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 35/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0062 - accuracy: 1.0000 - val\_loss: 0.0741 - val\_accuracy: 0.9712 - lr: 0.0010

Epoch 36/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0058 - accuracy: 1.0000 - val\_loss: 0.0758 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 37/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0055 - accuracy: 1.0000 - val\_loss: 0.0788 - val\_accuracy: 0.9798 - lr: 0.0010

Epoch 38/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0053 - accuracy: 1.0000 - val\_loss: 0.0729 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 39/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0050 - accuracy: 1.0000 - val\_loss: 0.0759 - val\_accuracy: 0.9798 - lr: 0.0010

Epoch 40/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0047 - accuracy: 1.0000 - val\_loss: 0.0723 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 41/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0046 - accuracy: 1.0000 - val\_loss: 0.0732 - val\_accuracy: 0.9741 - lr: 0.0010

Epoch 42/100

44/44 [==============================] - 12s 271ms/step - loss: 0.0044 - accuracy: 1.0000 - val\_loss: 0.0734 - val\_accuracy: 0.9769 - lr: 0.0010

Epoch 43/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0041 - accuracy: 1.0000 - val\_loss: 0.0727 - val\_accuracy: 0.9769 - lr: 0.0010

Epoch 44/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0040 - accuracy: 1.0000 - val\_loss: 0.0721 - val\_accuracy: 0.9741 - lr: 1.0000e-04

Epoch 45/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0718 - val\_accuracy: 0.9741 - lr: 1.0000e-04

Epoch 46/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0720 - val\_accuracy: 0.9741 - lr: 1.0000e-04

Epoch 47/100

44/44 [==============================] - 12s 270ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0717 - val\_accuracy: 0.9741 - lr: 1.0000e-04

Epoch 48/100

44/44 [==============================] - 12s 268ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0720 - val\_accuracy: 0.9741 - lr: 1.0000e-04

Epoch 49/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0719 - val\_accuracy: 0.9741 - lr: 1.0000e-05

Epoch 50/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0719 - val\_accuracy: 0.9741 - lr: 1.0000e-05

Epoch 51/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0719 - val\_accuracy: 0.9741 - lr: 1.0000e-05

Epoch 52/100

44/44 [==============================] - 12s 269ms/step - loss: 0.0039 - accuracy: 1.0000 - val\_loss: 0.0719 - val\_accuracy: 0.9741 - lr: 1.0000e-06

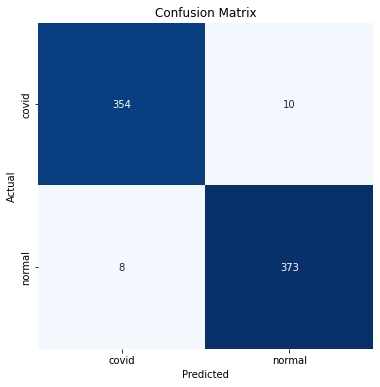
INFO:tensorflow:Assets written to: /content/drive/MyDrive/KaggleCTVGG16Split0.7noAug2484/assets

Test Loss: 0.06493

Test Accuracy: 97.58%

/usr/local/lib/python3.7/dist-packages/ipykernel\_launcher.py:126: DeprecationWarning: `np.int` is a deprecated alias for the builtin `int`. To silence this warning, use `int` by itself. Doing this will not modify any behavior and is safe. When replacing `np.int`, you may wish to use e.g. `np.int64` or `np.int32` to specify the precision. If you wish to review your current use, check the release note link for additional information.

Deprecated in NumPy 1.20; for more details and guidance: <https://numpy.org/devdocs/release/1.20.0-notes.html#deprecations>



Classification Report:

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precision recall f1-score support

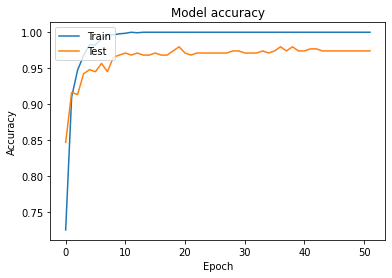
covid 0.98 0.97 0.98 364

normal 0.97 0.98 0.98 381

accuracy 0.98 745

macro avg 0.98 0.98 0.98 745

weighted avg 0.98 0.98 0.98 745



<matplotlib.legend.Legend at 0x7fd81d705390>

