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Layer (type) Output Shape Param #

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

input\_2 (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\_conv4 (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\_conv4 (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\_conv4 (Conv2D) (None, 14, 14, 512) 2359808

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

flatten (Flatten) (None, 25088) 0

dense (Dense) (None, 1) 25089

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Total params: 20,049,473

Trainable params: 25,089

Non-trainable params: 20,024,384

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Epoch 1/100

44/44 [==============================] - 218s 5s/step - loss: 0.5491 - accuracy: 0.7343 - val\_loss: 0.3480 - val\_accuracy: 0.8703 - lr: 0.0010

Epoch 2/100

44/44 [==============================] - 12s 274ms/step - loss: 0.2906 - accuracy: 0.8805 - val\_loss: 0.2942 - val\_accuracy: 0.8790 - lr: 0.0010

Epoch 3/100

44/44 [==============================] - 12s 274ms/step - loss: 0.2297 - accuracy: 0.9143 - val\_loss: 0.2376 - val\_accuracy: 0.9078 - lr: 0.0010

Epoch 4/100

44/44 [==============================] - 12s 276ms/step - loss: 0.1685 - accuracy: 0.9518 - val\_loss: 0.2021 - val\_accuracy: 0.9251 - lr: 0.0010

Epoch 5/100

44/44 [==============================] - 12s 277ms/step - loss: 0.1320 - accuracy: 0.9698 - val\_loss: 0.2076 - val\_accuracy: 0.9164 - lr: 0.0010

Epoch 6/100

44/44 [==============================] - 12s 279ms/step - loss: 0.1085 - accuracy: 0.9820 - val\_loss: 0.1690 - val\_accuracy: 0.9424 - lr: 0.0010

Epoch 7/100

44/44 [==============================] - 12s 282ms/step - loss: 0.0969 - accuracy: 0.9849 - val\_loss: 0.1611 - val\_accuracy: 0.9366 - lr: 0.0010

Epoch 8/100

44/44 [==============================] - 12s 277ms/step - loss: 0.0940 - accuracy: 0.9784 - val\_loss: 0.1698 - val\_accuracy: 0.9337 - lr: 0.0010

Epoch 9/100

44/44 [==============================] - 12s 275ms/step - loss: 0.0728 - accuracy: 0.9914 - val\_loss: 0.1703 - val\_accuracy: 0.9337 - lr: 0.0010

Epoch 10/100

44/44 [==============================] - 12s 277ms/step - loss: 0.0600 - accuracy: 0.9993 - val\_loss: 0.1317 - val\_accuracy: 0.9597 - lr: 0.0010

Epoch 11/100

44/44 [==============================] - 12s 279ms/step - loss: 0.0554 - accuracy: 0.9971 - val\_loss: 0.1350 - val\_accuracy: 0.9625 - lr: 0.0010

Epoch 12/100

44/44 [==============================] - 12s 278ms/step - loss: 0.0461 - accuracy: 0.9993 - val\_loss: 0.1318 - val\_accuracy: 0.9481 - lr: 0.0010

Epoch 13/100

44/44 [==============================] - 12s 278ms/step - loss: 0.0429 - accuracy: 0.9978 - val\_loss: 0.1234 - val\_accuracy: 0.9625 - lr: 0.0010

Epoch 14/100

44/44 [==============================] - 12s 278ms/step - loss: 0.0396 - accuracy: 1.0000 - val\_loss: 0.1217 - val\_accuracy: 0.9625 - lr: 0.0010

Epoch 15/100

44/44 [==============================] - 12s 279ms/step - loss: 0.0345 - accuracy: 1.0000 - val\_loss: 0.1135 - val\_accuracy: 0.9654 - lr: 0.0010

Epoch 16/100

44/44 [==============================] - 12s 276ms/step - loss: 0.0336 - accuracy: 1.0000 - val\_loss: 0.1173 - val\_accuracy: 0.9654 - lr: 0.0010

Epoch 17/100

44/44 [==============================] - 12s 278ms/step - loss: 0.0310 - accuracy: 1.0000 - val\_loss: 0.1153 - val\_accuracy: 0.9654 - lr: 0.0010

Epoch 18/100

44/44 [==============================] - 12s 277ms/step - loss: 0.0260 - accuracy: 1.0000 - val\_loss: 0.1162 - val\_accuracy: 0.9654 - lr: 0.0010

Epoch 19/100

44/44 [==============================] - 12s 278ms/step - loss: 0.0236 - accuracy: 1.0000 - val\_loss: 0.1083 - val\_accuracy: 0.9625 - lr: 1.0000e-04

Epoch 20/100

44/44 [==============================] - 12s 278ms/step - loss: 0.0235 - accuracy: 1.0000 - val\_loss: 0.1083 - val\_accuracy: 0.9654 - lr: 1.0000e-04

Epoch 21/100

44/44 [==============================] - 12s 280ms/step - loss: 0.0233 - accuracy: 1.0000 - val\_loss: 0.1081 - val\_accuracy: 0.9625 - lr: 1.0000e-04

Epoch 22/100

44/44 [==============================] - 12s 279ms/step - loss: 0.0231 - accuracy: 1.0000 - val\_loss: 0.1097 - val\_accuracy: 0.9654 - lr: 1.0000e-04

Epoch 23/100

44/44 [==============================] - 13s 282ms/step - loss: 0.0229 - accuracy: 1.0000 - val\_loss: 0.1078 - val\_accuracy: 0.9654 - lr: 1.0000e-04

Epoch 24/100

44/44 [==============================] - 12s 277ms/step - loss: 0.0227 - accuracy: 1.0000 - val\_loss: 0.1086 - val\_accuracy: 0.9654 - lr: 1.0000e-04

Epoch 25/100

44/44 [==============================] - 12s 277ms/step - loss: 0.0226 - accuracy: 1.0000 - val\_loss: 0.1089 - val\_accuracy: 0.9654 - lr: 1.0000e-04

Epoch 26/100

44/44 [==============================] - 12s 275ms/step - loss: 0.0224 - accuracy: 1.0000 - val\_loss: 0.1100 - val\_accuracy: 0.9654 - lr: 1.0000e-04

Epoch 27/100

44/44 [==============================] - 12s 276ms/step - loss: 0.0221 - accuracy: 1.0000 - val\_loss: 0.1086 - val\_accuracy: 0.9625 - lr: 1.0000e-05

Epoch 28/100

44/44 [==============================] - 12s 277ms/step - loss: 0.0220 - accuracy: 1.0000 - val\_loss: 0.1081 - val\_accuracy: 0.9654 - lr: 1.0000e-05

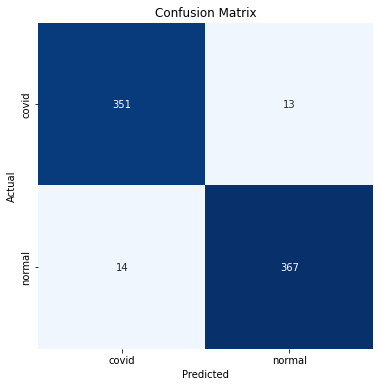
INFO:tensorflow:Assets written to: /content/drive/MyDrive/KaggleCTVGG19Split0.7noAug2484/assets

Test Loss: 0.09129

Test Accuracy: 96.38%

/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

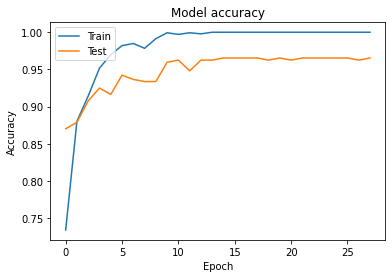
covid 0.96 0.96 0.96 364

normal 0.97 0.96 0.96 381

accuracy 0.96 745

macro avg 0.96 0.96 0.96 745

weighted avg 0.96 0.96 0.96 745



<matplotlib.legend.Legend at 0x7fd81e6d5a90>

