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Epoch 1/100

55/55 [==============================] - 594s 11s/step - loss: 0.9902 - accuracy: 0.5616 - val\_loss: 0.5331 - val\_accuracy: 0.7765 - lr: 0.0010

Epoch 2/100

55/55 [==============================] - 50s 908ms/step - loss: 0.6419 - accuracy: 0.6590 - val\_loss: 0.5961 - val\_accuracy: 0.6567 - lr: 0.0010

Epoch 3/100

55/55 [==============================] - 49s 895ms/step - loss: 0.5124 - accuracy: 0.7333 - val\_loss: 0.4272 - val\_accuracy: 0.8111 - lr: 0.0010

Epoch 4/100

55/55 [==============================] - 49s 892ms/step - loss: 0.4498 - accuracy: 0.7874 - val\_loss: 0.7729 - val\_accuracy: 0.6037 - lr: 0.0010

Epoch 5/100

55/55 [==============================] - 50s 901ms/step - loss: 0.4559 - accuracy: 0.7707 - val\_loss: 0.3947 - val\_accuracy: 0.8272 - lr: 0.0010

Epoch 6/100

55/55 [==============================] - 49s 892ms/step - loss: 0.3983 - accuracy: 0.8139 - val\_loss: 0.4743 - val\_accuracy: 0.7396 - lr: 0.0010

Epoch 7/100

55/55 [==============================] - 50s 899ms/step - loss: 0.4122 - accuracy: 0.7938 - val\_loss: 0.4778 - val\_accuracy: 0.7488 - lr: 0.0010

Epoch 8/100

55/55 [==============================] - 50s 901ms/step - loss: 0.3911 - accuracy: 0.8180 - val\_loss: 0.3365 - val\_accuracy: 0.8710 - lr: 0.0010

Epoch 9/100

55/55 [==============================] - 50s 907ms/step - loss: 0.3481 - accuracy: 0.8404 - val\_loss: 0.4132 - val\_accuracy: 0.7627 - lr: 0.0010

Epoch 10/100

55/55 [==============================] - 50s 898ms/step - loss: 0.3580 - accuracy: 0.8301 - val\_loss: 0.4009 - val\_accuracy: 0.7719 - lr: 0.0010

Epoch 11/100

55/55 [==============================] - 50s 909ms/step - loss: 0.3114 - accuracy: 0.8664 - val\_loss: 0.3349 - val\_accuracy: 0.8387 - lr: 0.0010

Epoch 12/100

55/55 [==============================] - 50s 906ms/step - loss: 0.3074 - accuracy: 0.8738 - val\_loss: 0.4115 - val\_accuracy: 0.7673 - lr: 0.0010

Epoch 13/100

55/55 [==============================] - 49s 899ms/step - loss: 0.3003 - accuracy: 0.8721 - val\_loss: 0.3231 - val\_accuracy: 0.8410 - lr: 0.0010

Epoch 14/100

55/55 [==============================] - 50s 915ms/step - loss: 0.2661 - accuracy: 0.8946 - val\_loss: 0.2871 - val\_accuracy: 0.8802 - lr: 0.0010

Epoch 15/100

55/55 [==============================] - 49s 900ms/step - loss: 0.3161 - accuracy: 0.8600 - val\_loss: 0.4431 - val\_accuracy: 0.7811 - lr: 0.0010

Epoch 16/100

55/55 [==============================] - 49s 888ms/step - loss: 0.2886 - accuracy: 0.8727 - val\_loss: 0.2997 - val\_accuracy: 0.8525 - lr: 0.0010

Epoch 17/100

55/55 [==============================] - 49s 900ms/step - loss: 0.3893 - accuracy: 0.8053 - val\_loss: 0.3225 - val\_accuracy: 0.8387 - lr: 0.0010

Epoch 18/100

55/55 [==============================] - 50s 915ms/step - loss: 0.2317 - accuracy: 0.9119 - val\_loss: 0.2735 - val\_accuracy: 0.8963 - lr: 1.0000e-04

Epoch 19/100

55/55 [==============================] - 50s 901ms/step - loss: 0.2271 - accuracy: 0.9171 - val\_loss: 0.2660 - val\_accuracy: 0.9009 - lr: 1.0000e-04

Epoch 20/100

55/55 [==============================] - 50s 904ms/step - loss: 0.2289 - accuracy: 0.9090 - val\_loss: 0.2647 - val\_accuracy: 0.9009 - lr: 1.0000e-04

Epoch 21/100

55/55 [==============================] - 49s 892ms/step - loss: 0.2284 - accuracy: 0.9165 - val\_loss: 0.2642 - val\_accuracy: 0.9009 - lr: 1.0000e-04

Epoch 22/100

55/55 [==============================] - 49s 884ms/step - loss: 0.2272 - accuracy: 0.9217 - val\_loss: 0.2629 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 23/100

55/55 [==============================] - 49s 899ms/step - loss: 0.2231 - accuracy: 0.9188 - val\_loss: 0.2828 - val\_accuracy: 0.8940 - lr: 1.0000e-04

Epoch 24/100

55/55 [==============================] - 49s 900ms/step - loss: 0.2242 - accuracy: 0.9159 - val\_loss: 0.2617 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 25/100

55/55 [==============================] - 49s 900ms/step - loss: 0.2221 - accuracy: 0.9205 - val\_loss: 0.2617 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 26/100

55/55 [==============================] - 50s 902ms/step - loss: 0.2206 - accuracy: 0.9199 - val\_loss: 0.2650 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 27/100

55/55 [==============================] - 50s 913ms/step - loss: 0.2243 - accuracy: 0.9194 - val\_loss: 0.2602 - val\_accuracy: 0.9124 - lr: 1.0000e-04

Epoch 28/100

55/55 [==============================] - 50s 907ms/step - loss: 0.2221 - accuracy: 0.9245 - val\_loss: 0.2717 - val\_accuracy: 0.8802 - lr: 1.0000e-04

Epoch 29/100

55/55 [==============================] - 50s 902ms/step - loss: 0.2212 - accuracy: 0.9188 - val\_loss: 0.2588 - val\_accuracy: 0.9055 - lr: 1.0000e-04

Epoch 30/100

55/55 [==============================] - 50s 905ms/step - loss: 0.2196 - accuracy: 0.9211 - val\_loss: 0.2583 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 31/100

55/55 [==============================] - 49s 895ms/step - loss: 0.2248 - accuracy: 0.9113 - val\_loss: 0.2575 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 32/100

55/55 [==============================] - 49s 888ms/step - loss: 0.2192 - accuracy: 0.9257 - val\_loss: 0.2573 - val\_accuracy: 0.9101 - lr: 1.0000e-04

Epoch 33/100

55/55 [==============================] - 49s 901ms/step - loss: 0.2231 - accuracy: 0.9205 - val\_loss: 0.2570 - val\_accuracy: 0.9101 - lr: 1.0000e-04

Epoch 34/100

55/55 [==============================] - 50s 906ms/step - loss: 0.2228 - accuracy: 0.9211 - val\_loss: 0.2566 - val\_accuracy: 0.9124 - lr: 1.0000e-04

Epoch 35/100

55/55 [==============================] - 50s 905ms/step - loss: 0.2199 - accuracy: 0.9217 - val\_loss: 0.2556 - val\_accuracy: 0.9101 - lr: 1.0000e-04

Epoch 36/100

55/55 [==============================] - 49s 889ms/step - loss: 0.2181 - accuracy: 0.9217 - val\_loss: 0.2553 - val\_accuracy: 0.9101 - lr: 1.0000e-04

Epoch 37/100

55/55 [==============================] - 48s 880ms/step - loss: 0.2223 - accuracy: 0.9171 - val\_loss: 0.2583 - val\_accuracy: 0.9055 - lr: 1.0000e-04

Epoch 38/100

55/55 [==============================] - 48s 874ms/step - loss: 0.2183 - accuracy: 0.9211 - val\_loss: 0.2735 - val\_accuracy: 0.8756 - lr: 1.0000e-04

Epoch 39/100

55/55 [==============================] - 48s 872ms/step - loss: 0.2173 - accuracy: 0.9251 - val\_loss: 0.2557 - val\_accuracy: 0.9055 - lr: 1.0000e-04

Epoch 40/100

55/55 [==============================] - 48s 878ms/step - loss: 0.2107 - accuracy: 0.9309 - val\_loss: 0.2533 - val\_accuracy: 0.9078 - lr: 1.0000e-05

Epoch 41/100

55/55 [==============================] - 48s 866ms/step - loss: 0.2106 - accuracy: 0.9303 - val\_loss: 0.2542 - val\_accuracy: 0.9124 - lr: 1.0000e-05

Epoch 42/100

55/55 [==============================] - 48s 877ms/step - loss: 0.2108 - accuracy: 0.9286 - val\_loss: 0.2542 - val\_accuracy: 0.9124 - lr: 1.0000e-05

Epoch 43/100

55/55 [==============================] - 48s 872ms/step - loss: 0.2108 - accuracy: 0.9263 - val\_loss: 0.2535 - val\_accuracy: 0.9101 - lr: 1.0000e-05

Epoch 44/100

55/55 [==============================] - 48s 863ms/step - loss: 0.2110 - accuracy: 0.9280 - val\_loss: 0.2529 - val\_accuracy: 0.9124 - lr: 1.0000e-06

Epoch 45/100

55/55 [==============================] - 48s 869ms/step - loss: 0.2102 - accuracy: 0.9315 - val\_loss: 0.2530 - val\_accuracy: 0.9078 - lr: 1.0000e-06

Epoch 46/100

55/55 [==============================] - 48s 863ms/step - loss: 0.2101 - accuracy: 0.9320 - val\_loss: 0.2529 - val\_accuracy: 0.9078 - lr: 1.0000e-06

Epoch 47/100

55/55 [==============================] - 48s 869ms/step - loss: 0.2100 - accuracy: 0.9309 - val\_loss: 0.2530 - val\_accuracy: 0.9078 - lr: 1.0000e-06

Epoch 48/100

55/55 [==============================] - 48s 874ms/step - loss: 0.2099 - accuracy: 0.9309 - val\_loss: 0.2530 - val\_accuracy: 0.9078 - lr: 1.0000e-07

Epoch 49/100

55/55 [==============================] - 48s 875ms/step - loss: 0.2099 - accuracy: 0.9309 - val\_loss: 0.2530 - val\_accuracy: 0.9078 - lr: 1.0000e-07

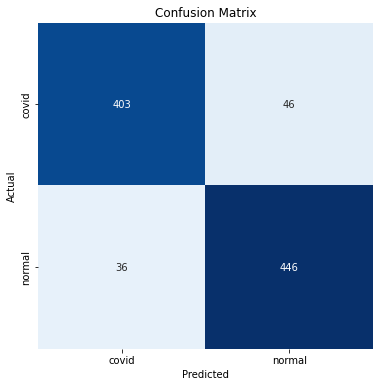
INFO:tensorflow:Assets written to: /content/drive/MyDrive/ResNet50Split0.7noAug/assets

Test Loss: 0.24580

Test Accuracy: 91.19%

/usr/local/lib/python3.7/dist-packages/ipykernel\_launcher.py:123: 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 0.92 0.90 0.91 449

normal 0.91 0.93 0.92 482

accuracy 0.91 931

macro avg 0.91 0.91 0.91 931

weighted avg 0.91 0.91 0.91 931

