Found 1736 validated image filenames belonging to 2 classes.

Found 434 validated image filenames belonging to 2 classes.

Found 931 validated image filenames belonging to 2 classes.

Epoch 1/100

55/55 [==============================] - 677s 12s/step - loss: 0.5491 - accuracy: 0.7235 - val\_loss: 0.4312 - val\_accuracy: 0.8088 - lr: 0.0010

Epoch 2/100

55/55 [==============================] - 426s 8s/step - loss: 0.3996 - accuracy: 0.8214 - val\_loss: 0.3658 - val\_accuracy: 0.8618 - lr: 0.0010

Epoch 3/100

55/55 [==============================] - 426s 8s/step - loss: 0.3713 - accuracy: 0.8485 - val\_loss: 0.3220 - val\_accuracy: 0.8664 - lr: 0.0010

Epoch 4/100

55/55 [==============================] - 421s 8s/step - loss: 0.3332 - accuracy: 0.8698 - val\_loss: 0.3118 - val\_accuracy: 0.8641 - lr: 0.0010

Epoch 5/100

55/55 [==============================] - 417s 8s/step - loss: 0.3183 - accuracy: 0.8583 - val\_loss: 0.2733 - val\_accuracy: 0.8986 - lr: 0.0010

Epoch 6/100

55/55 [==============================] - 419s 8s/step - loss: 0.3058 - accuracy: 0.8715 - val\_loss: 0.2751 - val\_accuracy: 0.9101 - lr: 0.0010

Epoch 7/100

55/55 [==============================] - 415s 8s/step - loss: 0.2949 - accuracy: 0.8808 - val\_loss: 0.2764 - val\_accuracy: 0.8894 - lr: 0.0010

Epoch 8/100

55/55 [==============================] - 416s 8s/step - loss: 0.2844 - accuracy: 0.8808 - val\_loss: 0.2386 - val\_accuracy: 0.9147 - lr: 0.0010

Epoch 9/100

55/55 [==============================] - 417s 8s/step - loss: 0.2767 - accuracy: 0.8865 - val\_loss: 0.2475 - val\_accuracy: 0.9032 - lr: 0.0010

Epoch 10/100

55/55 [==============================] - 415s 8s/step - loss: 0.2737 - accuracy: 0.8911 - val\_loss: 0.2327 - val\_accuracy: 0.9171 - lr: 0.0010

Epoch 11/100

55/55 [==============================] - 416s 8s/step - loss: 0.2636 - accuracy: 0.8934 - val\_loss: 0.2521 - val\_accuracy: 0.8963 - lr: 0.0010

Epoch 12/100

55/55 [==============================] - 416s 8s/step - loss: 0.2526 - accuracy: 0.9021 - val\_loss: 0.2302 - val\_accuracy: 0.9147 - lr: 0.0010

Epoch 13/100

55/55 [==============================] - 419s 8s/step - loss: 0.2612 - accuracy: 0.8963 - val\_loss: 0.2369 - val\_accuracy: 0.9194 - lr: 0.0010

Epoch 14/100

55/55 [==============================] - 416s 8s/step - loss: 0.2414 - accuracy: 0.9003 - val\_loss: 0.2436 - val\_accuracy: 0.8940 - lr: 0.0010

Epoch 15/100

55/55 [==============================] - 414s 8s/step - loss: 0.2367 - accuracy: 0.9078 - val\_loss: 0.2408 - val\_accuracy: 0.9032 - lr: 0.0010

Epoch 16/100

55/55 [==============================] - 411s 7s/step - loss: 0.2413 - accuracy: 0.8992 - val\_loss: 0.2292 - val\_accuracy: 0.9194 - lr: 1.0000e-04

Epoch 17/100

55/55 [==============================] - 412s 7s/step - loss: 0.2528 - accuracy: 0.8888 - val\_loss: 0.2231 - val\_accuracy: 0.9171 - lr: 1.0000e-04

Epoch 18/100

55/55 [==============================] - 411s 7s/step - loss: 0.2531 - accuracy: 0.8934 - val\_loss: 0.2184 - val\_accuracy: 0.9194 - lr: 1.0000e-04

Epoch 19/100

55/55 [==============================] - 409s 7s/step - loss: 0.2361 - accuracy: 0.9044 - val\_loss: 0.2112 - val\_accuracy: 0.9309 - lr: 1.0000e-04

Epoch 20/100

55/55 [==============================] - 406s 7s/step - loss: 0.2477 - accuracy: 0.8963 - val\_loss: 0.2226 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 21/100

55/55 [==============================] - 406s 7s/step - loss: 0.2342 - accuracy: 0.8911 - val\_loss: 0.2205 - val\_accuracy: 0.9171 - lr: 1.0000e-04

Epoch 22/100

55/55 [==============================] - 407s 7s/step - loss: 0.2529 - accuracy: 0.8940 - val\_loss: 0.2351 - val\_accuracy: 0.9078 - lr: 1.0000e-04

Epoch 23/100

55/55 [==============================] - 406s 7s/step - loss: 0.2475 - accuracy: 0.8986 - val\_loss: 0.2240 - val\_accuracy: 0.9055 - lr: 1.0000e-05

Epoch 24/100

55/55 [==============================] - 407s 7s/step - loss: 0.2391 - accuracy: 0.9055 - val\_loss: 0.2399 - val\_accuracy: 0.9055 - lr: 1.0000e-05

Model: "sequential\_1"

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Layer (type) Output Shape Param #

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

xception (Functional) (None, 7, 7, 2048) 20861480

global\_average\_pooling2d\_1 (None, 2048) 0

(GlobalAveragePooling2D)

dropout\_1 (Dropout) (None, 2048) 0

dense\_1 (Dense) (None, 1) 2049

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

Total params: 20,863,529

Trainable params: 2,049

Non-trainable params: 20,861,480

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INFO:tensorflow:Assets written to: /content/drive/MyDrive/xception model/assets

/usr/local/lib/python3.7/dist-packages/keras/engine/functional.py:1410: CustomMaskWarning: Custom mask layers require a config and must override get\_config. When loading, the custom mask layer must be passed to the custom\_objects argument.

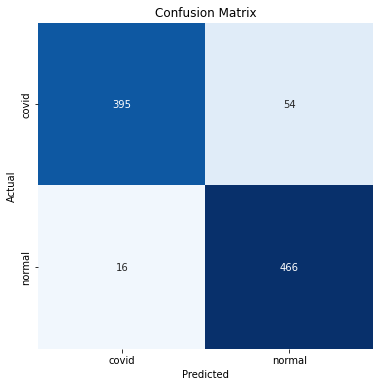
layer\_config = serialize\_layer\_fn(layer)

/usr/local/lib/python3.7/dist-packages/keras/saving/saved\_model/layer\_serialization.py:112: CustomMaskWarning: Custom mask layers require a config and must override get\_config. When loading, the custom mask layer must be passed to the custom\_objects argument.

return generic\_utils.serialize\_keras\_object(obj)

Test Loss: 0.21664

Test Accuracy: 92.48%



Classification Report:

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precision recall f1-score support

covid 0.96 0.88 0.92 449

normal 0.90 0.97 0.93 482

accuracy 0.92 931

macro avg 0.93 0.92 0.92 931

weighted avg 0.93 0.92 0.92 931