Found 316 validated image filenames belonging to 2 classes.

Found 78 validated image filenames belonging to 2 classes.

Found 169 validated image filenames belonging to 2 classes.

Epoch 1/100

10/10 [==============================] - 70s 7s/step - loss: 1.0847 - accuracy: 0.3608 - val\_loss: 0.6533 - val\_accuracy: 0.6667 - lr: 0.0010

Epoch 2/100

10/10 [==============================] - 64s 6s/step - loss: 0.6571 - accuracy: 0.6772 - val\_loss: 0.7149 - val\_accuracy: 0.6667 - lr: 0.0010

Epoch 3/100

10/10 [==============================] - 67s 7s/step - loss: 0.6507 - accuracy: 0.7342 - val\_loss: 0.7231 - val\_accuracy: 0.6667 - lr: 0.0010

Epoch 4/100

10/10 [==============================] - 65s 7s/step - loss: 0.6677 - accuracy: 0.7247 - val\_loss: 0.6627 - val\_accuracy: 0.6667 - lr: 0.0010

Epoch 5/100

10/10 [==============================] - 65s 7s/step - loss: 0.6089 - accuracy: 0.7025 - val\_loss: 0.6579 - val\_accuracy: 0.6667 - lr: 1.0000e-04

Epoch 6/100

10/10 [==============================] - 65s 7s/step - loss: 0.6333 - accuracy: 0.7120 - val\_loss: 0.6537 - val\_accuracy: 0.6667 - lr: 1.0000e-04

Model: "sequential\_2"

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Layer (type) Output Shape Param #

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

resnet50 (Functional) (None, 7, 7, 2048) 23587712

global\_average\_pooling2d\_2 (None, 2048) 0

(GlobalAveragePooling2D)

dropout\_2 (Dropout) (None, 2048) 0

dense\_2 (Dense) (None, 1) 2049

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

Total params: 23,589,761

Trainable params: 2,049

Non-trainable params: 23,587,712

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INFO:tensorflow:Assets written to: /content/drive/MyDrive/third 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: 0.64277

Test Accuracy: 73.37%

/usr/local/lib/python3.7/dist-packages/sklearn/metrics/\_classification.py:1318: UndefinedMetricWarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use `zero\_division` parameter to control this behavior.

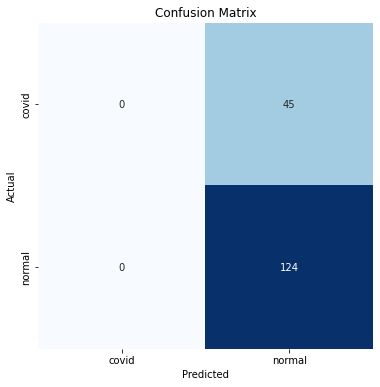
\_warn\_prf(average, modifier, msg\_start, len(result))

/usr/local/lib/python3.7/dist-packages/sklearn/metrics/\_classification.py:1318: UndefinedMetricWarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use `zero\_division` parameter to control this behavior.

\_warn\_prf(average, modifier, msg\_start, len(result))

/usr/local/lib/python3.7/dist-packages/sklearn/metrics/\_classification.py:1318: UndefinedMetricWarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use `zero\_division` parameter to control this behavior.

\_warn\_prf(average, modifier, msg\_start, len(result))



Classification Report:

----------------------

precision recall f1-score support

covid 0.00 0.00 0.00 45

normal 0.73 1.00 0.85 124

accuracy 0.73 169

macro avg 0.37 0.50 0.42 169

weighted avg 0.54 0.73 0.62 169

summed for preds = [[0.9713759 ]

[2.546268 ]

[2.530864 ]

[2.465302 ]

[2.4418344 ]

[2.4803877 ]

[2.4999952 ]

[2.5094237 ]

[2.4269707 ]

[1.8481181 ]

[2.5383446 ]

[0.6712656 ]

[2.242759 ]

[2.3167536 ]

[2.083663 ]

[2.508564 ]

[2.3347015 ]

[2.4089277 ]

[2.141701 ]

[2.4878314 ]

[2.4649801 ]

[2.0394244 ]

[2.2922306 ]

[2.539118 ]

[2.2650177 ]

[2.4876847 ]

[2.5655556 ]

[1.2392246 ]

[2.433171 ]

[2.3069448 ]

[2.5325694 ]

[2.5482223 ]

[2.4658337 ]

[2.4918199 ]

[0.7201694 ]

[2.1149263 ]

[2.4924808 ]

[2.4995358 ]

[2.4531379 ]

[2.5006325 ]

[2.5239847 ]

[2.0963964 ]

[2.4975495 ]

[0.6597895 ]

[2.3391378 ]

[2.3816316 ]

[1.7367301 ]

[1.0611846 ]

[0.93022 ]

[0.65854955]

[2.4271765 ]

[1.0774078 ]

[2.538869 ]

[0.6681814 ]

[2.5413342 ]

[2.167462 ]

[1.7576742 ]

[0.6656508 ]

[1.42713 ]

[2.557506 ]

[0.6961883 ]

[2.4453611 ]

[2.3728027 ]

[2.5150042 ]

[2.3515253 ]

[0.7384488 ]

[2.4265757 ]

[2.5146923 ]

[1.0783683 ]

[2.4272802 ]

[0.720378 ]

[2.4477043 ]

[2.4676404 ]

[0.8967775 ]

[0.61690086]

[2.5219464 ]

[2.3317506 ]

[0.5952446 ]

[0.6632525 ]

[2.5100222 ]

[2.550022 ]

[2.4630342 ]

[2.4602995 ]

[2.5305645 ]

[2.5494664 ]

[2.5497055 ]

[0.69407165]

[2.5385227 ]

[2.5288856 ]

[1.5949018 ]

[2.4765568 ]

[2.5492597 ]

[2.5393412 ]

[1.8987398 ]

[0.92929924]

[2.5272639 ]

[2.5416307 ]

[2.4991117 ]

[2.5656443 ]

[2.5631144 ]

[2.3944783 ]

[2.131092 ]

[2.5481641 ]

[2.518372 ]

[1.9245605 ]

[2.3509657 ]

[2.5501838 ]

[1.039132 ]

[0.859267 ]

[1.2952597 ]

[1.2829577 ]

[2.431377 ]

[1.2418977 ]

[2.5137248 ]

[2.5539782 ]

[2.3744326 ]

[2.4687073 ]

[1.3294141 ]

[2.499123 ]

[2.4533436 ]

[2.4731228 ]

[0.8246813 ]

[1.0734072 ]

[1.050011 ]

[2.3713145 ]

[2.4898295 ]

[0.8281585 ]

[2.1285481 ]

[2.500286 ]

[2.55484 ]

[0.89723074]

[2.4805753 ]

[2.4479585 ]

[1.2952597 ]

[2.3824506 ]

[2.5480566 ]

[2.5297234 ]

[2.4232235 ]

[2.4284883 ]

[1.1058111 ]

[2.517801 ]

[2.5305984 ]

[2.502728 ]

[2.1840959 ]

[0.8587105 ]

[2.5444274 ]

[2.4156852 ]

[1.0734072 ]

[2.5480185 ]

[1.6856844 ]

[2.5177019 ]

[2.513237 ]

[0.8006718 ]

[2.2000766 ]

[2.528887 ]

[2.4141521 ]

[2.3128 ]

[0.72671354]

[2.5659564 ]

[0.6745438 ]

[2.3607216 ]

[0.75825125]

[2.5154977 ]

[2.2917283 ]

[1.8802863 ]

[0.6369213 ]

[2.3317301 ]

[2.5208826 ]

[2.3132885 ]]

ensemble prediction = [[0]

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test\_images.labels = [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 0, 0, 0, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 1, 0, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 1, 0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 1, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1]

Accuracy Score for model1 = 0.9349112426035503

Accuracy Score for model2 = 0.9763313609467456

Accuracy Score for model3 = 0.7337278106508875

Accuracy Score for average ensemble = 0.9704142011834319

Accuracy Score for model1 = 0.9349112426035503

Accuracy Score for model2 = 0.9763313609467456

Accuracy Score for model3 = 0.7337278106508875

Accuracy Score for average ensemble = 0.9704142011834319

Accuracy Score for weighted average ensemble = [[0.387025 ]

[0.81852776]

[0.81613746]

[0.7950488 ]

[0.78483334]

[0.79262743]

[0.80120816]

[0.80614033]

[0.7712857 ]

[0.54790361]

[0.81643749]

[0.26817263]

[0.69755328]

[0.75341574]

[0.65834603]

[0.80371861]

[0.73540895]

[0.76507361]

[0.67119734]

[0.79584394]

[0.79858317]

[0.61625179]

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[0.79694693]

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[0.81281147]

[0.76570961]

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[0.82663975]

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[0.75598686]

[0.27619484]

[0.80667739]

[0.72971936]

[0.57146354]

[0.25463076]

[0.73278267]

[0.80875239]

[0.7261531 ]]

Accuracy Score for weighted average ensemble = [[0]

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Accuracy Score for weighted average ensemble = 0.9644970414201184

Max accuracy of 0.1 obained with w1= 0.3 w2= 0.4 and w3= 98.81656804733728