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.

Downloading data from <https://storage.googleapis.com/tensorflow/keras-applications/inception_v3/inception_v3_weights_tf_dim_ordering_tf_kernels_notop.h5>

87916544/87910968 [==============================] - 1s 0us/step

87924736/87910968 [==============================] - 1s 0us/step

Epoch 1/100

10/10 [==============================] - 21s 1s/step - loss: 0.7374 - accuracy: 0.6930 - val\_loss: 0.6999 - val\_accuracy: 0.6667 - lr: 0.0010

Epoch 2/100

10/10 [==============================] - 13s 1s/step - loss: 0.6046 - accuracy: 0.7152 - val\_loss: 0.4793 - val\_accuracy: 0.7564 - lr: 0.0010

Epoch 3/100

10/10 [==============================] - 13s 1s/step - loss: 0.5271 - accuracy: 0.7690 - val\_loss: 0.4300 - val\_accuracy: 0.7949 - lr: 0.0010

Epoch 4/100

10/10 [==============================] - 13s 1s/step - loss: 0.4690 - accuracy: 0.7532 - val\_loss: 0.3388 - val\_accuracy: 0.8974 - lr: 0.0010

Epoch 5/100

10/10 [==============================] - 12s 1s/step - loss: 0.3720 - accuracy: 0.8196 - val\_loss: 0.3374 - val\_accuracy: 0.8846 - lr: 0.0010

Epoch 6/100

10/10 [==============================] - 13s 1s/step - loss: 0.3992 - accuracy: 0.8323 - val\_loss: 0.3082 - val\_accuracy: 0.9359 - lr: 0.0010

Epoch 7/100

10/10 [==============================] - 12s 1s/step - loss: 0.3479 - accuracy: 0.8354 - val\_loss: 0.3434 - val\_accuracy: 0.8590 - lr: 0.0010

Epoch 8/100

10/10 [==============================] - 12s 1s/step - loss: 0.3011 - accuracy: 0.8797 - val\_loss: 0.2791 - val\_accuracy: 0.9231 - lr: 0.0010

Epoch 9/100

10/10 [==============================] - 13s 1s/step - loss: 0.3433 - accuracy: 0.8481 - val\_loss: 0.3417 - val\_accuracy: 0.9231 - lr: 0.0010

Epoch 10/100

10/10 [==============================] - 13s 1s/step - loss: 0.2894 - accuracy: 0.8766 - val\_loss: 0.2763 - val\_accuracy: 0.9359 - lr: 0.0010

Epoch 11/100

10/10 [==============================] - 12s 1s/step - loss: 0.2805 - accuracy: 0.9019 - val\_loss: 0.2124 - val\_accuracy: 0.9231 - lr: 0.0010

Epoch 12/100

10/10 [==============================] - 12s 1s/step - loss: 0.2816 - accuracy: 0.8861 - val\_loss: 0.2680 - val\_accuracy: 0.9359 - lr: 0.0010

Epoch 13/100

10/10 [==============================] - 12s 1s/step - loss: 0.2938 - accuracy: 0.8892 - val\_loss: 0.2506 - val\_accuracy: 0.9231 - lr: 0.0010

Epoch 14/100

10/10 [==============================] - 12s 1s/step - loss: 0.2305 - accuracy: 0.9082 - val\_loss: 0.2450 - val\_accuracy: 0.9231 - lr: 0.0010

Epoch 15/100

10/10 [==============================] - 12s 1s/step - loss: 0.2913 - accuracy: 0.8861 - val\_loss: 0.2429 - val\_accuracy: 0.9615 - lr: 1.0000e-04

Epoch 16/100

10/10 [==============================] - 12s 1s/step - loss: 0.2761 - accuracy: 0.9082 - val\_loss: 0.2335 - val\_accuracy: 0.9359 - lr: 1.0000e-04

Model: "sequential\_9"

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Layer (type) Output Shape Param #

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

inception\_v3 (Functional) (None, 5, 5, 2048) 21802784

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

lobalAveragePooling2D)

dropout\_14 (Dropout) (None, 2048) 0

dense\_17 (Dense) (None, 1) 2049

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

Total params: 21,804,833

Trainable params: 2,049

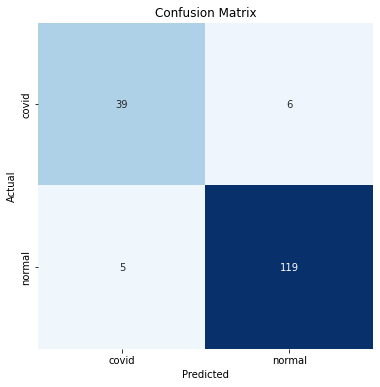
Non-trainable params: 21,802,784

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

Test Loss: 0.22116

Test Accuracy: 93.49%



Classification Report:

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precision recall f1-score support

covid 0.89 0.87 0.88 45

normal 0.95 0.96 0.96 124

accuracy 0.93 169

macro avg 0.92 0.91 0.92 169

weighted avg 0.93 0.93 0.93 169

summed for preds = [[0.5466292 ]

[2.8989282 ]

[2.952063 ]

[2.0545194 ]

[2.7002358 ]

[2.8743703 ]

[2.7511613 ]

[2.4315329 ]

[2.4364924 ]

[2.1122189 ]

[2.95458 ]

[0.12028144]

[2.6338782 ]

[2.0756283 ]

[1.9853113 ]

[2.896074 ]

[2.3842955 ]

[2.7636368 ]

[2.4177866 ]

[2.4629648 ]

[2.5341554 ]

[1.7792867 ]

[2.4462373 ]

[2.9155166 ]

[2.4415705 ]

[2.888917 ]

[2.9106965 ]

[1.6399844 ]

[2.709383 ]

[2.5289547 ]

[2.9319894 ]

[2.6934028 ]

[2.8375664 ]

[2.7315013 ]

[0.566126 ]

[2.509313 ]

[2.8307624 ]

[2.6178691 ]

[2.7225924 ]

[2.85805 ]

[2.4978535 ]

[2.4433517 ]

[2.4882095 ]

[0.14971802]

[1.8651927 ]

[2.7345562 ]

[1.4666688 ]

[0.9807245 ]

[0.6017222 ]

[0.16938907]

[2.753042 ]

[0.6701297 ]

[2.9557173 ]

[0.3683324 ]

[2.9475584 ]

[2.5074575 ]

[1.6401608 ]

[0.3250827 ]

[0.88266224]

[2.8159473 ]

[0.16794789]

[2.0301125 ]

[2.3116367 ]

[2.7637568 ]

[2.2849693 ]

[0.28850025]

[1.9537761 ]

[2.8734045 ]

[0.4949438 ]

[2.7973175 ]

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[0.3344415 ]

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[2.6506448 ]

[2.5176175 ]

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[2.9677958 ]

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[2.928592 ]

[2.6679034 ]

[1.3513058 ]

[2.7597399 ]

[2.4589872 ]

[2.8761148 ]

[1.3806711 ]

[0.61615336]

[2.9305139 ]

[2.8052268 ]

[2.1593769 ]

[2.7829902 ]

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[2.5761476 ]

[2.4146323 ]

[2.9083524 ]

[2.7278545 ]

[2.2343955 ]

[2.6269562 ]

[2.9557686 ]

[0.781447 ]

[0.26364923]

[1.2350262 ]

[1.167398 ]

[2.753641 ]

[0.74339473]

[2.8140101 ]

[2.8848052 ]

[2.583805 ]

[2.8077617 ]

[1.4335892 ]

[2.7304776 ]

[2.2827313 ]

[2.3925934 ]

[0.5013324 ]

[1.3722972 ]

[0.51090807]

[2.6972935 ]

[2.8978426 ]

[0.25153807]

[2.2612276 ]

[2.2884183 ]

[2.939675 ]

[0.35811237]

[2.84423 ]

[2.2968755 ]

[1.2350262 ]

[2.6934433 ]

[2.9151843 ]

[2.640276 ]

[2.6758177 ]

[2.1996212 ]

[1.1982594 ]

[2.9197578 ]

[2.8452358 ]

[2.856629 ]

[2.5185418 ]

[0.4035672 ]

[2.8242755 ]

[2.657392 ]

[1.3722972 ]

[2.8671322 ]

[2.0532782 ]

[2.8672628 ]

[2.879176 ]

[0.2630701 ]

[2.5537896 ]

[2.8357725 ]

[2.711615 ]

[2.4612014 ]

[0.26494718]

[2.759796 ]

[0.91706777]

[2.7486439 ]

[0.5181017 ]

[2.924758 ]

[1.9704007 ]

[2.2497146 ]

[0.48221716]

[2.735299 ]

[2.722926 ]

[2.550248 ]]

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 = 0.834319526627219

Accuracy Score for average ensemble = 0.9822485207100592

Accuracy Score for model1 = 0.9349112426035503

Accuracy Score for model2 = 0.9763313609467456

Accuracy Score for model3 = 0.834319526627219

Accuracy Score for average ensemble = 0.9822485207100592

Accuracy Score for weighted average ensemble = [[0.21712632]

[0.95959179]

[0.98461713]

[0.63073573]

[0.88819381]

[0.95022051]

[0.90167458]

[0.77498398]

[0.77509444]

[0.65354389]

[0.98293166]

[0.04777896]

[0.85400094]

[0.65696558]

[0.61900526]

[0.95872266]

[0.75524644]

[0.90695727]

[0.78163161]

[0.78589729]

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[0.87737937]

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[0.22561103]

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[0.89635839]

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[0.97038152]

[0.60118834]

[0.71923497]

[0.19274911]

[0.89421028]

[0.88956972]

[0.82093692]]

Accuracy Score for weighted average ensemble = [[0]

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Accuracy Score for weighted average ensemble = 0.9585798816568047

Max accuracy of 0.2 obained with w1= 0.4 w2= 0.1 and w3= 98.81656804733728