

Project Development Phase Model Performance Test

Date	9/11/2023
Team ID	Team-592462
Project Name	Fake/Real Logo Detection using Deep learning
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	-	<pre> [22] Python ... Model: "model_1" 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) 590880 block3_conv3 (Conv2D) (None, 56, 56, 256) 590880 block3_conv4 (Conv2D) (None, 56, 56, 256) 590880 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_1 (Flatten) (None, 25088) 0 dense_1 (Dense) (None, 63) 1580607 ===== Total params: 21604991 (82.42 MB) Trainable params: 1580607 (6.03 MB) Non-trainable params: 20024384 (76.39 MB) </pre>

2.	Accuracy	Training Accuracy: 0.9673 (96.73%) Validation Accuracy: 0.9855 (98.55%)	<pre>vgg19.fit(train,validation_data=test,epochs=20,steps_per_epoch=len(train),validation_steps =len(test))</pre> <pre>[25]</pre> <pre>... Epoch 1/20 35/35 [=====] - 8s 236ms/step - loss: 0.7242 - accuracy: 0.8091 - val_loss: 0.2182 - val_accuracy: 0.9418 Epoch 2/20 35/35 [=====] - 9s 266ms/step - loss: 0.4618 - accuracy: 0.8745 - val_loss: 0.1238 - val_accuracy: 0.9636 Epoch 3/20 35/35 [=====] - 9s 270ms/step - loss: 0.4733 - accuracy: 0.8782 - val_loss: 0.1443 - val_accuracy: 0.9564 Epoch 4/20 35/35 [=====] - 9s 266ms/step - loss: 0.5275 - accuracy: 0.8618 - val_loss: 0.1007 - val_accuracy: 0.9745 Epoch 5/20 35/35 [=====] - 9s 272ms/step - loss: 0.4143 - accuracy: 0.8855 - val_loss: 0.1534 - val_accuracy: 0.9564 Epoch 6/20 35/35 [=====] - 9s 251ms/step - loss: 0.4899 - accuracy: 0.8527 - val_loss: 0.0560 - val_accuracy: 0.9855 Epoch 7/20 35/35 [=====] - 9s 240ms/step - loss: 0.4434 - accuracy: 0.8745 - val_loss: 0.0661 - val_accuracy: 0.9673 Epoch 8/20 35/35 [=====] - 9s 264ms/step - loss: 0.4126 - accuracy: 0.8673 - val_loss: 0.0501 - val_accuracy: 0.9891 Epoch 9/20 35/35 [=====] - 9s 266ms/step - loss: 0.2838 - accuracy: 0.9127 - val_loss: 0.0580 - val_accuracy: 0.9782 Epoch 10/20 35/35 [=====] - 9s 266ms/step - loss: 0.2414 - accuracy: 0.9291 - val_loss: 0.1120 - val_accuracy: 0.9636 Epoch 11/20 35/35 [=====] - 8s 233ms/step - loss: 0.3988 - accuracy: 0.8691 - val_loss: 0.0418 - val_accuracy: 0.9818 Epoch 12/20 35/35 [=====] - 9s 254ms/step - loss: 0.2549 - accuracy: 0.9236 - val_loss: 0.0262 - val_accuracy: 0.9927 Epoch 13/20 35/35 [=====] - 9s 265ms/step - loss: 0.2500 - accuracy: 0.9327 - val_loss: 0.0166 - val_accuracy: 0.9964 Epoch 14/20 35/35 [=====] - 9s 251ms/step - loss: 0.2437 - accuracy: 0.9327 - val_loss: 0.0276 - val_accuracy: 0.9891 Epoch 15/20 35/35 [=====] - 9s 264ms/step - loss: 0.1914 - accuracy: 0.9491 - val_loss: 0.0139 - val_accuracy: 0.9964 Epoch 16/20 35/35 [=====] - 8s 235ms/step - loss: 0.1633 - accuracy: 0.9582 - val_loss: 0.0270 - val_accuracy: 0.9891 Epoch 17/20 35/35 [=====] - 9s 262ms/step - loss: 0.2111 - accuracy: 0.9327 - val_loss: 0.0122 - val_accuracy: 1.0000 Epoch 18/20 35/35 [=====] - 9s 263ms/step - loss: 0.2125 - accuracy: 0.9418 - val_loss: 0.0174 - val_accuracy: 0.9964 Epoch 19/20 35/35 [=====] - 8s 236ms/step - loss: 0.0939 - accuracy: 0.9691 - val_loss: 0.0067 - val_accuracy: 1.0000 Epoch 20/20 35/35 [=====] - 9s 248ms/step - loss: 0.1283 - accuracy: 0.9673 - val_loss: 0.0388 - val_accuracy: 0.9855 ... <keras.src.callbacks.History at 0x79df912f1b70></pre>
3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	