

OUTPUT:

Found 6360 images belonging to 7 classes.
 Found 2731 images belonging to 7 classes.
 Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/vgg16/vgg16_weights_tf_dim_ordering_tf_kernels_notop.h5
`58889256/58889256 -- 2s 0us/step`
 Model: "functional"

Layer (type)	Output Shape	Param #
input_layer (InputLayer)	(None, 224, 224, 3)	0
block1_conv1 (Conv2D)	(None, 224, 224, 64)	1,792
block1_conv2 (Conv2D)	(None, 224, 224, 64)	36,928
block1_pool (MaxPooling2D)	(None, 112, 112, 64)	0
block2_conv1 (Conv2D)	(None, 112, 112, 128)	73,856
block2_conv2 (Conv2D)	(None, 112, 112, 128)	147,584
block2_pool (MaxPooling2D)	(None, 56, 56, 128)	0
block3_conv1 (Conv2D)	(None, 56, 56, 256)	295,168
block3_conv2 (Conv2D)	(None, 56, 56, 256)	590,080
block3_conv3 (Conv2D)	(None, 56, 56, 256)	590,080
block3_pool (MaxPooling2D)	(None, 28, 28, 256)	0
block4_conv1 (Conv2D)	(None, 28, 28, 512)	1,180,160
block4_conv2 (Conv2D)	(None, 28, 28, 512)	2,359,808
block4_conv3 (Conv2D)	(None, 28, 28, 512)	2,359,808
block4_pool (MaxPooling2D)	(None, 14, 14, 512)	0
block5_conv1 (Conv2D)	(None, 14, 14, 512)	2,359,808
block5_conv2 (Conv2D)	(None, 14, 14, 512)	2,359,808
block5_conv3 (Conv2D)	(None, 14, 14, 512)	2,359,808
block5_pool (MaxPooling2D)	(None, 7, 7, 512)	0
global_average_pooling2d (GlobalAveragePooling2D)	(None, 512)	0
dense (Dense)	(None, 128)	65,664
dropout (Dropout)	(None, 128)	0
dense_1 (Dense)	(None, 7)	903

Total params: 14,781,255 (56.39 MB)
 Trainable params: 66,567 (260.03 MB)
 Non-trainable params: 14,714,688 (56.13 MB)

```
/usr/local/lib/python3.12/dist-packages/keras/src/trainers/data_adapters/py_dataset_adapter.py:121: UserWarning: Your 'PyDataset' class should call `super().__init__(**kwargs)` in its constructor. '**kwargs' can include self._warn_if_super_not_called()
  
```

Epoch 1/25
`199/199 -- 0s 50ms/step - accuracy: 0.1559 - loss: 2.0339`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 157s 71ms/step - accuracy: 0.1559 - loss: 2.0337 - val_accuracy: 0.1754 - val_loss: 1.8999`
 Epoch 2/25

`199/199 -- 0s 453ms/step - accuracy: 0.1743 - loss: 1.9361`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 106s 523ms/step - accuracy: 0.1743 - loss: 1.9361 - val_accuracy: 0.2047 - val_loss: 1.8901`
`199/199 -- 0s 452ms/step - accuracy: 0.1833 - loss: 1.9089`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 105s 528ms/step - accuracy: 0.1834 - loss: 1.9089 - val_accuracy: 0.2234 - val_loss: 1.8844`
`199/199 -- 0s 450ms/step - accuracy: 0.2112 - loss: 1.8891`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 105s 527ms/step - accuracy: 0.2112 - loss: 1.8891 - val_accuracy: 0.2329 - val_loss: 1.8783`
`199/199 -- 0s 456ms/step - accuracy: 0.2091 - loss: 1.8879`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 106s 533ms/step - accuracy: 0.2091 - loss: 1.8879 - val_accuracy: 0.2354 - val_loss: 1.8738`
 Epoch 6/25
`199/199 -- 0s 452ms/step - accuracy: 0.2197 - loss: 1.8731`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 105s 528ms/step - accuracy: 0.2198 - loss: 1.8731 - val_accuracy: 0.2398 - val_loss: 1.8673`
`199/199 -- 0s 451ms/step - accuracy: 0.2331 - loss: 1.8630`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 105s 528ms/step - accuracy: 0.2331 - loss: 1.8630 - val_accuracy: 0.2483 - val_loss: 1.8626`
 Epoch 8/25
`199/199 -- 0s 454ms/step - accuracy: 0.2246 - loss: 1.8617`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 106s 531ms/step - accuracy: 0.2246 - loss: 1.8617 - val_accuracy: 0.2534 - val_loss: 1.8583`
 Epoch 9/25
`199/199 -- 0s 453ms/step - accuracy: 0.2475 - loss: 1.8548`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 106s 531ms/step - accuracy: 0.2475 - loss: 1.8540 - val_accuracy: 0.2600 - val_loss: 1.8516`
 Epoch 10/25
`199/199 -- 0s 457ms/step - accuracy: 0.2516 - loss: 1.8514`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 143s 535ms/step - accuracy: 0.2516 - loss: 1.8514 - val_accuracy: 0.2538 - val_loss: 1.8483`
 Epoch 11/25
`199/199 -- 0s 445ms/step - accuracy: 0.2521 - loss: 1.8429`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 104s 523ms/step - accuracy: 0.2521 - loss: 1.8435 - val_accuracy: 0.2622 - val_loss: 1.8435`
 Epoch 12/25
`199/199 -- 0s 451ms/step - accuracy: 0.2629 - loss: 1.8361`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 105s 527ms/step - accuracy: 0.2629 - loss: 1.8361 - val_accuracy: 0.2655 - val_loss: 1.8388`
 Epoch 13/25
`199/199 -- 0s 444ms/step - accuracy: 0.2445 - loss: 1.8448`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 104s 521ms/step - accuracy: 0.2445 - loss: 1.8449 - val_accuracy: 0.2699 - val_loss: 1.8365`
`199/199 -- 0s 436ms/step - accuracy: 0.2559 - loss: 1.8268`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 102s 513ms/step - accuracy: 0.2559 - loss: 1.8268 - val_accuracy: 0.2647 - val_loss: 1.8327`
 Epoch 15/25
`199/199 -- 0s 429ms/step - accuracy: 0.2726 - loss: 1.8233`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 101s 507ms/step - accuracy: 0.2726 - loss: 1.8233 - val_accuracy: 0.2652 - val_loss: 1.8306`
 Epoch 16/25
`199/199 -- 0s 434ms/step - accuracy: 0.2625 - loss: 1.8289`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 102s 511ms/step - accuracy: 0.2625 - loss: 1.8280 - val_accuracy: 0.2640 - val_loss: 1.8261`
`199/199 -- 0s 444ms/step - accuracy: 0.2680 - loss: 1.8109`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 104s 522ms/step - accuracy: 0.2680 - loss: 1.8104 - val_accuracy: 0.2655 - val_loss: 1.8245`
`199/199 -- 0s 435ms/step - accuracy: 0.2781 - loss: 1.8242`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 102s 513ms/step - accuracy: 0.2781 - loss: 1.8241 - val_accuracy: 0.2728 - val_loss: 1.8203`
 Epoch 19/25
`199/199 -- 0s 441ms/step - accuracy: 0.2729 - loss: 1.8086`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 103s 519ms/step - accuracy: 0.2728 - loss: 1.8086 - val_accuracy: 0.2783 - val_loss: 1.8162`
`199/199 -- 0s 431ms/step - accuracy: 0.2772 - loss: 1.7999`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1
`199/199 -- 101s 509ms/step - accuracy: 0.2771 - loss: 1.7999 - val_accuracy: 0.2816 - val_loss: 1.8130`
 Epoch 21/25
`199/199 -- 0s 421ms/step - accuracy: 0.2807 - loss: 1.7846`WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered 1

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199/199 ━━━━━━ 0s 431ms/step - accuracy: 0.2772 - loss: 1.7999WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save(1/1 -- 2s/step
199/199 ━━━━━━ 101s 509ms/step - accuracy: 0.2771 - loss: 1.7999 - val_accuracy: 0.2816 - val_loss: 1.8130
Epoch 21/25
199/199 ━━━━━━ 0s 431ms/step - accuracy: 0.2657 - loss: 1.8154WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save(1/1 -- 2s/step
199/199 ━━━━━━ 101s 507ms/step - accuracy: 0.2657 - loss: 1.8154 - val_accuracy: 0.2794 - val_loss: 1.8120
Epoch 22/25
199/199 ━━━━━━ 0s 429ms/step - accuracy: 0.2727 - loss: 1.8064WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save(1/1 -- 2s/step
199/199 ━━━━━━ 101s 507ms/step - accuracy: 0.2727 - loss: 1.8065 - val_accuracy: 0.2838 - val_loss: 1.8075
Epoch 23/25
199/199 ━━━━━━ 0s 429ms/step - accuracy: 0.2757 - loss: 1.8024WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save(1/1 -- 2s/step
199/199 ━━━━━━ 101s 506ms/step - accuracy: 0.2757 - loss: 1.8024 - val_accuracy: 0.2823 - val_loss: 1.8049
Epoch 24/25
199/199 ━━━━━━ 0s 434ms/step - accuracy: 0.2696 - loss: 1.7964WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save(1/1 -- 2s/step
199/199 ━━━━━━ 102s 510ms/step - accuracy: 0.2697 - loss: 1.7960 - val_accuracy: 0.2863 - val_loss: 1.8047
Epoch 25/25
199/199 ━━━━━━ 106s 531ms/step - accuracy: 0.2705 - loss: 1.8100 - val_accuracy: 0.2794 - val_loss: 1.8047
WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save(1/1 -- 2s/step

```

Model Accuracy

Epoch	Train Accuracy	Validation Accuracy
0	0.16	0.16
5	0.22	0.24
10	0.25	0.26
15	0.26	0.27
20	0.27	0.28
25	0.28	0.28

Model Loss

Epoch	Train Loss	Validation Loss
0	2.00	2.00
5	1.88	1.87
10	1.85	1.84
15	1.83	1.82
20	1.81	1.80
25	1.80	1.80

Predicted Emotion: Angry

TEST IMAGE:

