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Capa input_3 congelada...
Capa block1_conv1 congelada...
Capa block1_conv2 congelada...
Capa block1_pool congelada...
Capa block2_conv1 congelada...
Capa block2_conv2 congelada...
Capa block2_pool congelada...
Capa block3_conv1 congelada...
Capa block3_conv2 congelada...
Capa block3_conv3 congelada...
Capa block3_pool congelada...
Capa block4_conv1 congelada...
Capa block4_conv2 congelada...
Capa block4_conv3 congelada...
Capa block4_pool congelada...
Model: "sequential_3"

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Layer (type)	Output Shape	Param #
vgg16 (Model)	(None, 4, 4, 512)	14714688
flatten_3 (Flatten)	(None, 8192)	0
dense_7 (Dense)	(None, 1024)	8389632
dense_8 (Dense)	(None, 1024)	1049600
dropout_3 (Dropout)	(None, 1024)	0
dense_9 (Dense)	(None, 102)	104550
Total params: 24,258,470		
Trainable params: 16,623,206		
Non-trainable params: 7,635,264		

```

Creando subset de datos ...
Creando sub-conjunto de datos con 102 clases y 100 muestras por clase
number_of_classes: 102
Sub-conjunto con 102 clases creado.
Cantidad de muestras: 6398
Creando juegos de datos de train, validate y test ...
Creando datos de train, validate y test ...
Datos de train, validate y test creados.

```

Split de Entrenamiento, Validación y prueba: 4478, 960, 960

Entrenando el modelo...

Train on 4478 samples, validate on 960 samples

Epoch 1/15

4478/4478 [=====] - 6s 1ms/step - loss: 3.8763 - acc: 0.1994 - val_loss: 2.3896 - val_acc: 0.4979

Epoch 2/15

4478/4478 [=====] - 5s 1ms/step - loss: 1.7651 - acc: 0.5782 - val_loss: 1.1800 - val_acc: 0.7260

Epoch 3/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.9144 - acc: 0.7631 - val_loss: 0.8968 - val_acc: 0.7740

Epoch 4/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.5153 - acc: 0.8582 - val_loss: 0.7469 - val_acc: 0.7958

Epoch 5/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.3118 - acc: 0.9125 - val_loss: 0.7119 - val_acc: 0.8031

Epoch 6/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.1987 - acc: 0.9480 - val_loss: 0.6866 - val_acc: 0.8333

Epoch 7/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.1306 - acc: 0.9656 - val_loss: 0.6652 - val_acc: 0.8313

Epoch 8/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.0867 - acc: 0.9781 - val_loss: 0.6948 - val_acc: 0.8198

Epoch 9/15

4478/4478 [=====] - 6s 1ms/step - loss: 0.0617 - acc: 0.9844 - val_loss: 0.6598 - val_acc: 0.8302

Epoch 10/15

4478/4478 [=====] - 6s 1ms/step - loss: 0.0552 - acc: 0.9839 - val_loss: 0.6736 - val_acc: 0.8229

Epoch 11/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.0472 - acc: 0.9879 - val_loss: 0.6292 - val_acc: 0.8406

Epoch 12/15

4478/4478 [=====] - 6s 1ms/step - loss: 0.0374 - acc: 0.9906 - val_loss: 0.6906 - val_acc: 0.8271

Epoch 13/15

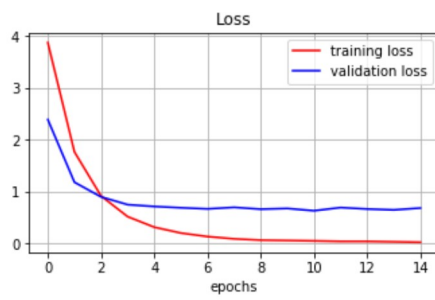
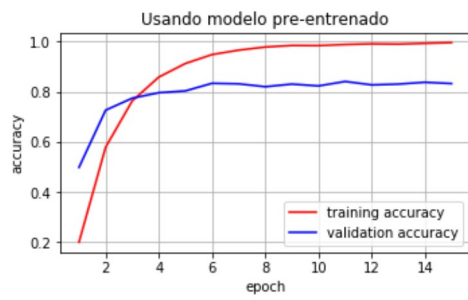
4478/4478 [=====] - 5s 1ms/step - loss: 0.0376 - acc: 0.9895 - val_loss: 0.6627 - val_acc: 0.8302

Epoch 14/15

4478/4478 [=====] - 6s 1ms/step - loss: 0.0295 - acc: 0.9929 - val_loss: 0.6460 - val_acc: 0.8375

Epoch 15/15

4478/4478 [=====] - 5s 1ms/step - loss: 0.0208 - acc: 0.9958 - val_loss: 0.6813 - val_acc: 0.8323



Exactitud en subconjunto de test:
 Predict loss: 0.6311272002756596
 Predict accuracy: 0.84375
 Exactitud sobre todo el dataset:
 Predict loss: 0.31709125988911185
 Predict accuracy: 0.9268452706396938
 (0.3171, 0.9268)