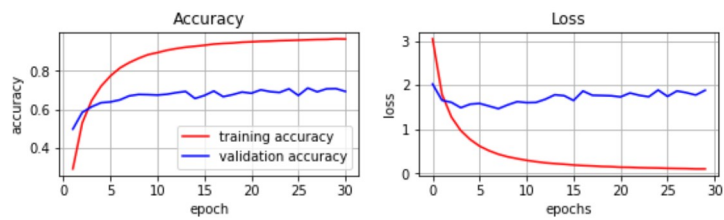


```
Creando conjunto de datos ...
Creando sub-conjunto de datos con 102 clases y 100 muestras por clase
number_of_classes: 102
Sub-conjunto con 102 clases creado.
Cantidad de muestras: 6398
Creando sets de train, validate y test ...
Creando el modelo ... final_L2_4_Adam_1e-4
Sin optimizador, hay que compilar el modelo.
=====
Entrenando ... final_L2_4_Adam_1e-4
EarlyStop con Accuracy
Epoch 1/30
4198/4198 [=====] - 238s 57ms/step - loss: 3.0511 - acc: 0.2947 - val_loss: 2.0276 - val_acc: 0.5000
Epoch 2/30
4198/4198 [=====] - 243s 58ms/step - loss: 1.7957 - acc: 0.5323 - val_loss: 1.6600 - val_acc: 0.5865
Epoch 3/30
4198/4198 [=====] - 243s 58ms/step - loss: 1.2813 - acc: 0.6473 - val_loss: 1.6137 - val_acc: 0.6156
Epoch 4/30
4198/4198 [=====] - 242s 58ms/step - loss: 0.9741 - acc: 0.7217 - val_loss: 1.4920 - val_acc: 0.6365
Epoch 5/30
4198/4198 [=====] - 238s 57ms/step - loss: 0.7733 - acc: 0.7746 - val_loss: 1.5723 - val_acc: 0.6406
Epoch 6/30
4198/4198 [=====] - 241s 57ms/step - loss: 0.6227 - acc: 0.8158 - val_loss: 1.5888 - val_acc: 0.6510
Epoch 7/30
4198/4198 [=====] - 244s 58ms/step - loss: 0.5192 - acc: 0.8436 - val_loss: 1.5295 - val_acc: 0.6719
Epoch 8/30
4198/4198 [=====] - 245s 58ms/step - loss: 0.4390 - acc: 0.8660 - val_loss: 1.4701 - val_acc: 0.6792
Epoch 9/30
4198/4198 [=====] - 244s 58ms/step - loss: 0.3807 - acc: 0.8847 - val_loss: 1.5565 - val_acc: 0.6781
Epoch 10/30
4198/4198 [=====] - 243s 58ms/step - loss: 0.3389 - acc: 0.8953 - val_loss: 1.6291 - val_acc: 0.6760
Epoch 11/30
4198/4198 [=====] - 235s 56ms/step - loss: 0.3005 - acc: 0.9074 - val_loss: 1.6072 - val_acc: 0.6802
Epoch 12/30
4198/4198 [=====] - 225s 54ms/step - loss: 0.2702 - acc: 0.9161 - val_loss: 1.6115 - val_acc: 0.6885
Epoch 13/30
4198/4198 [=====] - 224s 53ms/step - loss: 0.2441 - acc: 0.9232 - val_loss: 1.6840 - val_acc: 0.6948
Epoch 14/30
4198/4198 [=====] - 224s 53ms/step - loss: 0.2267 - acc: 0.9279 - val_loss: 1.7847 - val_acc: 0.6583
Epoch 15/30
4198/4198 [=====] - 224s 53ms/step - loss: 0.2122 - acc: 0.9333 - val_loss: 1.7647 - val_acc: 0.6740
Epoch 16/30
4198/4198 [=====] - 224s 53ms/step - loss: 0.1946 - acc: 0.9394 - val_loss: 1.6556 - val_acc: 0.6969
Epoch 17/30
4198/4198 [=====] - 230s 55ms/step - loss: 0.1825 - acc: 0.9428 - val_loss: 1.8703 - val_acc: 0.6677
Epoch 18/30
4198/4198 [=====] - 243s 58ms/step - loss: 0.1739 - acc: 0.9450 - val_loss: 1.7738 - val_acc: 0.6781
Epoch 19/30
4198/4198 [=====] - 245s 58ms/step - loss: 0.1616 - acc: 0.9490 - val_loss: 1.7690 - val_acc: 0.6917
Epoch 20/30
4198/4198 [=====] - 243s 58ms/step - loss: 0.1564 - acc: 0.9510 - val_loss: 1.7624 - val_acc: 0.6854
Epoch 21/30
4198/4198 [=====] - 239s 57ms/step - loss: 0.1453 - acc: 0.9536 - val_loss: 1.7363 - val_acc: 0.7031
Epoch 22/30
4198/4198 [=====] - 225s 54ms/step - loss: 0.1423 - acc: 0.9548 - val_loss: 1.8257 - val_acc: 0.6937
Epoch 23/30
4198/4198 [=====] - 225s 54ms/step - loss: 0.1343 - acc: 0.9570 - val_loss: 1.7731 - val_acc: 0.6896
Epoch 24/30
4198/4198 [=====] - 224s 53ms/step - loss: 0.1299 - acc: 0.9583 - val_loss: 1.7395 - val_acc: 0.7083
Epoch 25/30
4198/4198 [=====] - 225s 54ms/step - loss: 0.1265 - acc: 0.9597 - val_loss: 1.8932 - val_acc: 0.6740
Epoch 26/30
4198/4198 [=====] - 224s 53ms/step - loss: 0.1197 - acc: 0.9614 - val_loss: 1.7480 - val_acc: 0.7125
Epoch 27/30
4198/4198 [=====] - 247s 59ms/step - loss: 0.1159 - acc: 0.9630 - val_loss: 1.8717 - val_acc: 0.6927
Epoch 28/30
4198/4198 [=====] - 244s 58ms/step - loss: 0.1131 - acc: 0.9636 - val_loss: 1.8328 - val_acc: 0.7083
Epoch 29/30
4198/4198 [=====] - 246s 59ms/step - loss: 0.1064 - acc: 0.9663 - val_loss: 1.7791 - val_acc: 0.7094
Epoch 30/30
4198/4198 [=====] - 242s 58ms/step - loss: 0.1066 - acc: 0.9655 - val_loss: 1.8872 - val_acc: 0.6948

Modelo guardado en: C:/Users/administrador0/Downloads/modelo_0_final_L2_4_Adam_1e-4.hdf5

Tiempo de ejecución del experimento: 7082.0
```



Evaluando ...

Exactitud validate : 65.52 %, Loss: 2.2396

Exactitud test : 69.48 %, Loss: 1.8872

Exactitud todo el dataset: 86.82 %, Loss: 0.8317