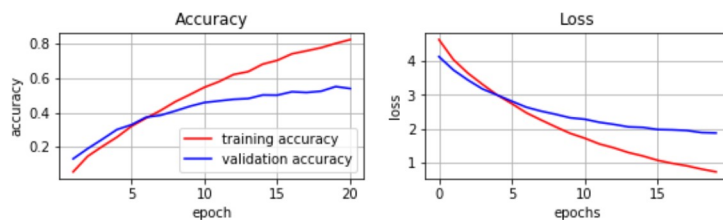


```

Creando conjunto de datos ...
Creando sets de train, validate y test ...
Creando el modelo ...
Sin optimizador, hay que compilar el modelo.
Entrenando ...
Train on 4478 samples, validate on 960 samples
Epoch 1/20
4478/4478 [=====] - 14s 3ms/step - loss: 4.6453 - acc: 0.0556 - val_loss: 4.1404 - val_acc: 0.1313
Epoch 2/20
4478/4478 [=====] - 9s 2ms/step - loss: 4.0484 - acc: 0.1460 - val_loss: 3.7412 - val_acc: 0.1906
Epoch 3/20
4478/4478 [=====] - 9s 2ms/step - loss: 3.6443 - acc: 0.2032 - val_loss: 3.4422 - val_acc: 0.2448
Epoch 4/20
4478/4478 [=====] - 9s 2ms/step - loss: 3.3128 - acc: 0.2570 - val_loss: 3.1776 - val_acc: 0.3010
Epoch 5/20
4478/4478 [=====] - 9s 2ms/step - loss: 2.9991 - acc: 0.3205 - val_loss: 2.9984 - val_acc: 0.3292
Epoch 6/20
4478/4478 [=====] - 9s 2ms/step - loss: 2.7431 - acc: 0.3676 - val_loss: 2.8151 - val_acc: 0.3729
Epoch 7/20
4478/4478 [=====] - 9s 2ms/step - loss: 2.4716 - acc: 0.4122 - val_loss: 2.6379 - val_acc: 0.3844
Epoch 8/20
4478/4478 [=====] - 9s 2ms/step - loss: 2.2600 - acc: 0.4629 - val_loss: 2.5221 - val_acc: 0.4094
Epoch 9/20
4478/4478 [=====] - 9s 2ms/step - loss: 2.0572 - acc: 0.5040 - val_loss: 2.4285 - val_acc: 0.4365
Epoch 10/20
4478/4478 [=====] - 9s 2ms/step - loss: 1.8628 - acc: 0.5469 - val_loss: 2.3239 - val_acc: 0.4583
Epoch 11/20
4478/4478 [=====] - 9s 2ms/step - loss: 1.7181 - acc: 0.5797 - val_loss: 2.2821 - val_acc: 0.4677
Epoch 12/20
4478/4478 [=====] - 9s 2ms/step - loss: 1.5480 - acc: 0.6210 - val_loss: 2.1905 - val_acc: 0.4771
Epoch 13/20
4478/4478 [=====] - 9s 2ms/step - loss: 1.4321 - acc: 0.6378 - val_loss: 2.1284 - val_acc: 0.4813
Epoch 14/20
4478/4478 [=====] - 9s 2ms/step - loss: 1.2924 - acc: 0.6813 - val_loss: 2.0542 - val_acc: 0.5021
Epoch 15/20
4478/4478 [=====] - 9s 2ms/step - loss: 1.1892 - acc: 0.7034 - val_loss: 2.0381 - val_acc: 0.5010
Epoch 16/20
4478/4478 [=====] - 9s 2ms/step - loss: 1.0620 - acc: 0.7412 - val_loss: 1.9773 - val_acc: 0.5208
Epoch 17/20
4478/4478 [=====] - 9s 2ms/step - loss: 0.9718 - acc: 0.7586 - val_loss: 1.9674 - val_acc: 0.5167
Epoch 18/20
4478/4478 [=====] - 9s 2ms/step - loss: 0.8990 - acc: 0.7767 - val_loss: 1.9469 - val_acc: 0.5240
Epoch 19/20
4478/4478 [=====] - 9s 2ms/step - loss: 0.8022 - acc: 0.8017 - val_loss: 1.8855 - val_acc: 0.5510
Epoch 20/20
4478/4478 [=====] - 9s 2ms/step - loss: 0.7204 - acc: 0.8240 - val_loss: 1.8738 - val_acc: 0.5396
Tiempo de ejecución del experimento: 185.0

```



```

Evaluando ...
Exactitud validate: 53.9583 %, Loss: 1.8738
Exactitud test: 56.0417 %, Loss: 1.8574
Exactitud todo el dataset: 81.9027 %, Loss: 0.8651

```