```
C:\Users\Usuario\AppData\Local\Programs\Python\Python311\python.exe "C:\Users\Usuario\PycharmProjects\AYR_2024_1\Unidad 2\Intro_ConvolutionalNeuronalNetwork\entrenar.py"
2024-02-19 08:42:39.807461: I tensorflow/core/util/port.cc:113] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
WARNING:tensorflow:From C:\Users\Usuario\AppData\Local\Programs\Python\Python311\Lib\site-packages\keras\src\losses.py:2976: The name tf.losses.sparse_softmax_cross_entropy is deprecated. Please use tf.compat.v1.losses.sparse_softmax_cross_entropy instead.

WARNING:tensorflow:From C:\Users\Usuario\AppData\Local\Programs\Python\Python311\Lib\site-packages\keras\src\backend.py:277: The name tf.reset_default_graph is deprecated. Please use tf.compat.v1.reset_default_graph instead.

Found 100 images belonging to 2 classes.
Found 60 images belonging to 2 classes.
2024-02-19 08:42:44.525279: I tensorflow/core/platform/cpu_feature_guard.cc:182] This TensorFlow binary is optimized to use available CPU instructions in performance-critical operations.
To enable the following instructions: SSE SSE2 SSE3 SSE4.1 SSE4.2 AVX2 FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.
WARNING:tensorflow:From C:\Users\Usuario\AppData\Local\Programs\Python\Python311\Lib\site-packages\keras\src\layers\pooling\max_pooling2d.py:161: The name tf.nn.max_pool is deprecated. Please use tf.nn.max_pool2d instead.

Epoch 1/20
WARNING:tensorflow:From C:\Users\Usuario\AppData\Local\Programs\Python\Python311\Lib\site-packages\
```

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14 keras\src\utils\tf_utils.py:492: The name tf.ragged.
   RaggedTensorValue is deprecated. Please use tf.compat
   .v1.ragged.RaggedTensorValue instead.
15
16 WARNING:tensorflow:From C:\Users\Usuario\AppData\
   Local\Programs\Python\Python311\Lib\site-packages\
   keras\src\engine\base_layer_utils.py:384: The name tf
   .executing_eagerly_outside_functions is deprecated.
   Please use tf.compat.v1.
   executing_eagerly_outside_functions instead.
17
18 30/30 [==============================] - 36s 1s/step
    - loss: 3.7933 - accuracy: 0.5795 - val_loss: 0.1035
    - val_accuracy: 1.0000
19 Epoch 2/20
20 30/30 [==============================] - 35s 1s/step
    - loss: 0.3064 - accuracy: 0.9205 - val_loss: 8.
   8810e-04 - val_accuracy: 1.0000
21 Epoch 3/20
22 30/30 [==============================] - 35s 1s/step
    - loss: 0.0019 - accuracy: 1.0000 - val_loss: 6.
   9155e-05 - val_accuracy: 1.0000
23 Epoch 4/20
24 30/30 [==============================] - 35s 1s/step
    - loss: 3.4863e-04 - accuracy: 1.0000 - val_loss: 4.
   0465e-05 - val_accuracy: 1.0000
25 Epoch 5/20
26 30/30 [==============================] - 35s 1s/step
    - loss: 9.5097e-05 - accuracy: 1.0000 - val_loss: 1.
   3502e-05 - val_accuracy: 1.0000
27 Epoch 6/20
28 30/30 [==============================] - 35s 1s/step
    - loss: 1.4625e-04 - accuracy: 1.0000 - val_loss: 1.
   6943e-05 - val_accuracy: 1.0000
29 Epoch 7/20
30 30/30 [==============================] - 35s 1s/step
    - loss: 1.6224e-04 - accuracy: 1.0000 - val_loss: 2.
   9169e-05 - val_accuracy: 1.0000
31 Epoch 8/20
32 30/30 [==============================] - 35s 1s/step
    - loss: 3.7006e-04 - accuracy: 1.0000 - val_loss: 1.
```

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32 4102e-05 - val_accuracy: 1.0000
33 Epoch 9/20
34 30/30 [==============================] - 35s 1s/step
    - loss: 2.6594e-04 - accuracy: 1.0000 - val_loss: 1.
   1686e-05 - val_accuracy: 1.0000
35 Epoch 10/20
36 30/30 [==============================] - 35s 1s/step
    - loss: 2.5051e-04 - accuracy: 1.0000 - val_loss: 3.
   5683e-06 - val_accuracy: 1.0000
37 Epoch 11/20
38 30/30 [==============================] - 35s 1s/step
    - loss: 1.8344e-05 - accuracy: 1.0000 - val_loss: 4.
   6054e-06 - val_accuracy: 1.0000
39 Epoch 12/20
40 30/30 [==============================] - 35s 1s/step
    - loss: 3.1719e-05 - accuracy: 1.0000 - val_loss: 4.
   0849e-06 - val_accuracy: 1.0000
41 Epoch 13/20
42 30/30 [==============================] - 35s 1s/step
    - loss: 2.2132e-04 - accuracy: 1.0000 - val_loss: 5.
   0202e-05 - val_accuracy: 1.0000
43 Epoch 14/20
44 30/30 [==============================] - 35s 1s/step
    - loss: 3.0043e-04 - accuracy: 1.0000 - val_loss: 1.
   6053e-05 - val_accuracy: 1.0000
45 Epoch 15/20
46 30/30 [==============================] - 35s 1s/step
    - loss: 4.0503e-04 - accuracy: 1.0000 - val_loss: 1.
   3645e-05 - val_accuracy: 1.0000
47 Epoch 16/20
48 30/30 [==============================] - 36s 1s/step
    - loss: 0.0028 - accuracy: 1.0000 - val_loss: 1.
   0175e-04 - val_accuracy: 1.0000
49 Epoch 17/20
50 30/30 [==============================] - 35s 1s/step
    - loss: 0.0018 - accuracy: 1.0000 - val_loss: 2.
   4505e-05 - val_accuracy: 1.0000
51 Epoch 18/20
52 30/30 [==============================] - 35s 1s/step
    - loss: 1.4981e-04 - accuracy: 1.0000 - val_loss: 4.
   1723e-07 - val_accuracy: 1.0000
```

```
53 Epoch 19/20
54 30/30 [==============================] - 36s 1s/step
    - loss: 7.1550e-06 - accuracy: 1.0000 - val_loss: 3.
   2186e-07 - val_accuracy: 1.0000
55 Epoch 20/20
56 30/30 [==============================] - 39s 1s/step
    - loss: 1.2985e-04 - accuracy: 1.0000 - val_loss: 7.
   3115e-07 - val_accuracy: 1.0000
57 C:\Users\Usuario\AppData\Local\Programs\Python\
   Python311\Lib\site-packages\keras\src\engine\training
   .py:3103: UserWarning: You are saving your model as
   an HDF5 file via `model.save()`. This file format is
   considered legacy. We recommend using instead the
   native Keras format, e.g. `model.save('my_model.keras
   ')`.
58   saving_api.save_model(
59
60 Process finished with exit code 0
61
```