

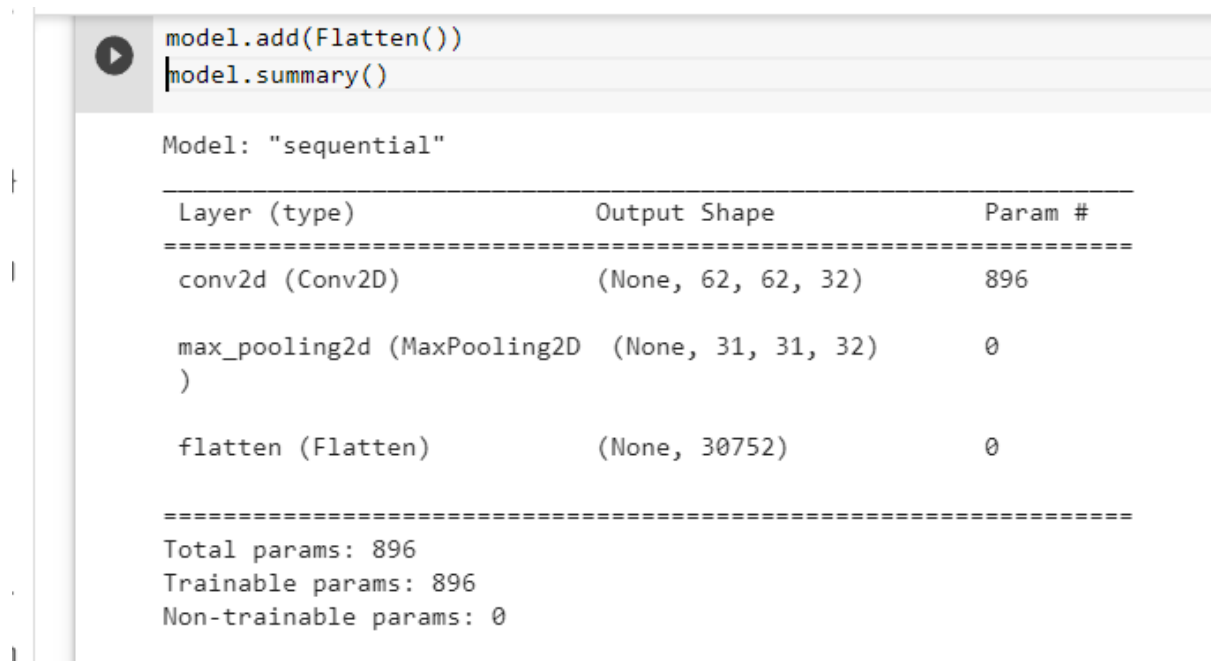
Adding Dense Layers

A dense layer is a deeply connected neural network layer. It is the most common and frequently used layer.

```
# Adding a fully connected layer
classifier.add(Dense(units=128, activation='relu'))
classifier.add(Dense(units=5, activation='softmax')) # softmax for more than 2
```

The number of neurons in the Dense layer is the same as the number of classes in the training set. The neurons in the last Dense layer, use softmax activation to convert their outputs into respective probabilities.

Understanding the model is a very important phase to properly using it for training and prediction purposes. Keras provides a simple method, a summary to get the full information about the model and its layers.



The screenshot shows a Jupyter Notebook interface. The code cell contains two lines: `model.add(Flatten())` and `model.summary()`. The output cell displays the model summary for a 'sequential' model. It includes a table with three columns: 'Layer (type)', 'Output Shape', and 'Param #'. The layers listed are 'conv2d (Conv2D)', 'max_pooling2d (MaxPooling2D)', and 'flatten (Flatten)'. Below the table, it shows the total number of parameters (896), trainable parameters (896), and non-trainable parameters (0).

```
model.add(Flatten())
model.summary()
```

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 62, 62, 32)	896
max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0
flatten (Flatten)	(None, 30752)	0

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Total params: 896
Trainable params: 896
Non-trainable params: 0