PROJECT NAME : AI-powered Nutrition Analyzer for Fitness Enthusiasts

Adding Dense Layers

A dense layer is a deeply connected neural network layer. It is the mostcommon 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 softmaxactivation to convert their outputs into respective probabilities.

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

```
classifier.summary()#summary of our model
```

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 62, 62, 32)	896
max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0
conv2d_1 (Conv2D)	(None, 29, 29, 32)	9248
max_pooling2d_1 (MaxPooling2	(None, 14, 14, 32)	0
flatten (Flatten)	(None, 6272)	0
dense (Dense)	(None, 128)	802944
dense_1 (Dense)	(None, 5)	645

Total params: 813,733
Trainable params: 813,733
Non-trainable params: 0