Adding DenseLayers

TeamID	PNT2022TMID22365
ProjectName	AI-Powered Nutrition Analyzer for Fitness Enthusiasts

Adenselayerisadeeplyconnectedneuralnetworklayer.Itisthemostcommonand frequentlyusedlayer.

```
# 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 ofclassesinthetrainingset.Theneuronsinthelast Denselayer,usesoftmaxactiva tiontoconverttheiroutputsintorespectiveprobabilities.

Understandingthemodelisaveryimportantphasetoproperlyusingitfortraining and prediction purposes. Keras provides a simple method, asummarytogetthefullinformationaboutthemodelanditslayers.

```
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
_________________________________________________________________
```