TEAM ID : PNT2022TMID16369

PROJECT NAME : AI-powered Nutrition Analyzer for Fitness Enthusiasts

Adding CNN Layers

- For information regarding CNN Layers refer to the link
  Link: **https://victorzhou.com/blog/intro-to-cnns-part-1/**
- As the input image contains three channels, we are specifyingthe input shape as (64,64,3).

- We are adding a two convolution layer with activation function as “relu” and
  with a small filter size (3,3) and the number of filters (32) followedby a max-pooling layer.
- Max pool layer is used to down sample the input.(Max pooling isa pooling operation that selects the maximum element from the region of the feature map covered by the filter)
- Flatten layer flattens the input. Does not affect the batch size.

```
### Creating the model

# Initializing the CNN
classifier = Sequential()

# First convolution layer and pooling
classifier.add(Conv2D(32, (3, 3), input_shape=(64, 64, 3), activation='relu'))
classifier.add(MaxPooling2D(pool_size=(2, 2)))

# Second convolution layer and pooling
classifier.add(Conv2D(32, (3, 3), activation='relu'))

# input_shape is going to be the pooled feature maps from the previous convolution layer
classifier.add(MaxPooling2D(pool_size=(2, 2)))

# Flattening the layers
classifier.add(Flatten())
```