

Adding CNN Layer

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Project Name	AI-powered nutrition analyzer for fitness enthusiasts

- ✓ For information regarding CNN Layers refer to the link
- ✓ As the input image contains three channels, we are specifying the 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) followed by a max-pooling layer.
- ✓ Max pool layer is used to down sample the input. (Max pooling is a 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())
```