

Adding CNN Layers

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Project Name	AI-powered Nutrition Analyzer for Fitness Enthusiasts

- 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 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 featuremap covered by the filter)
- Flatten layer flattens the input. Does not affect the batch size.

```
model = models.Sequential()
model.add(layers.Conv2D(32, (3, 3),
activation='relu',
input_shape=(32, 32, 3)))
model.add(layers.MaxPooling2D((2, 2)))
model.add(layers.Conv2D(64, (3, 3), activation='relu'))
model.add(layers.MaxPooling2D((2, 2)))
model.add(layers.Conv2D(64, (3, 3), activation='relu'))
model.add(layers.Flatten())
model.add(layers.Dense(64, activation='relu'))
model.add(layers.Dense(10))

[141] model.summary()
```