Computer Vision with Embedded Machine Learning

Convolutional Neural Network

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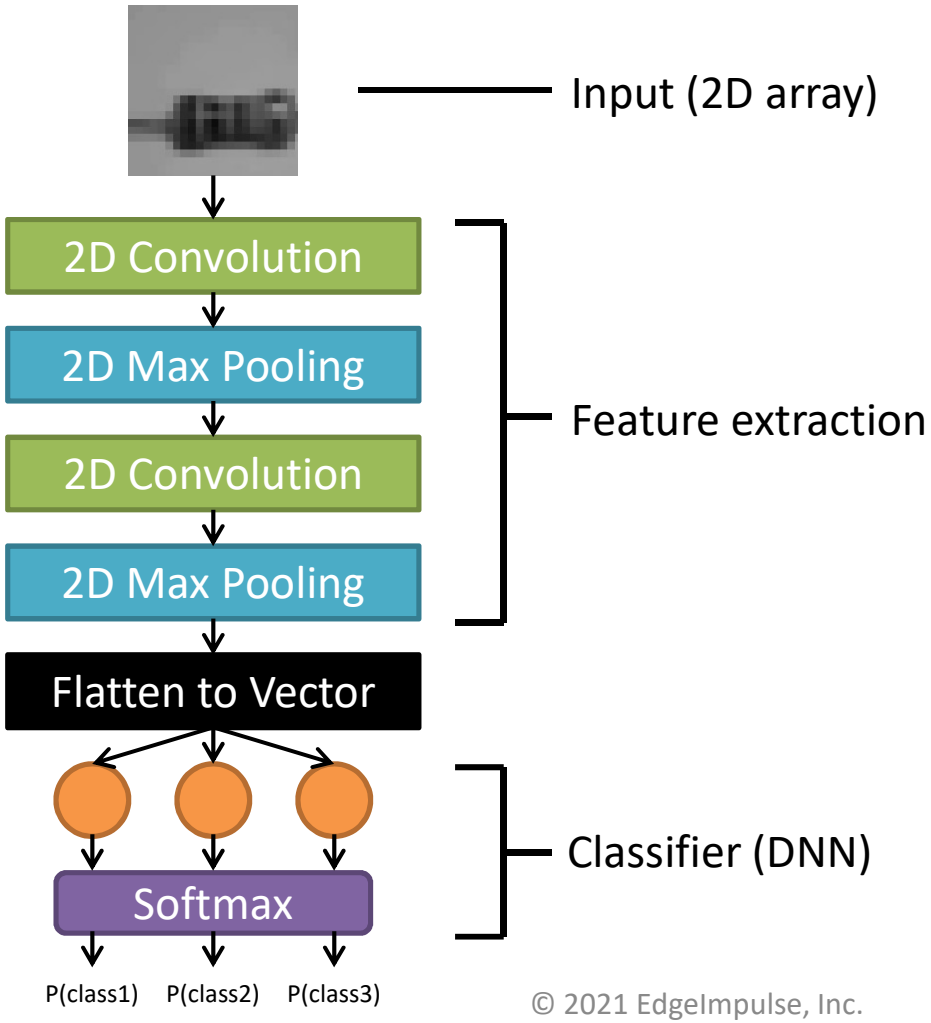

Popular input formats:
- Float [0.0..1.0]
- Uint8 [0..255]
- Int8 [-128..127]

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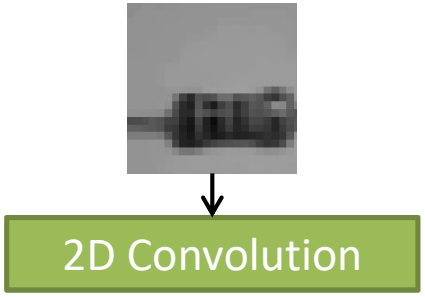

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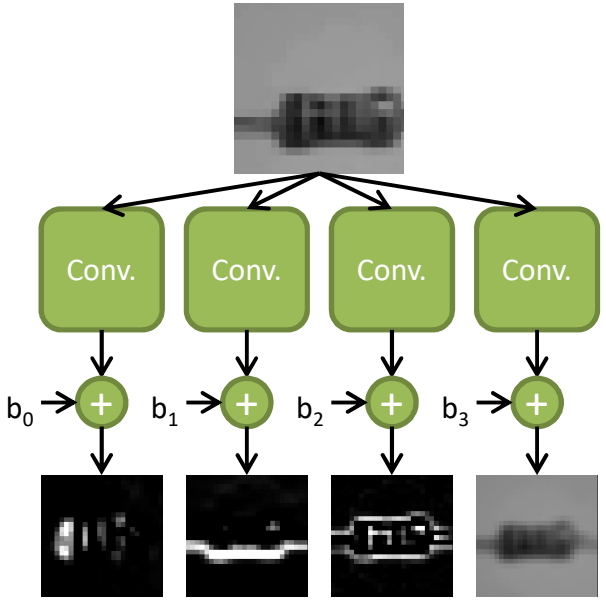
Kernel: 3x3
Stride: 1
Padding: Same



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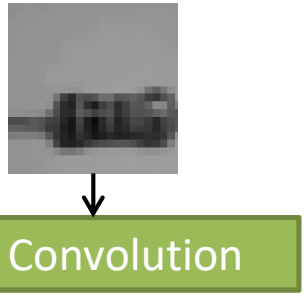

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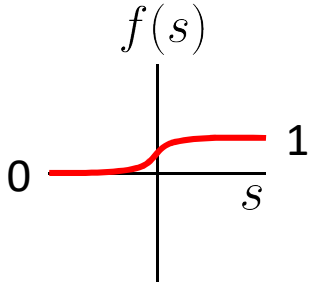
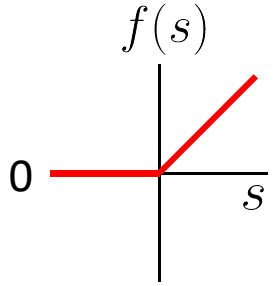
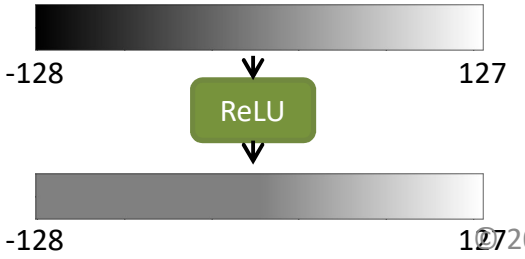
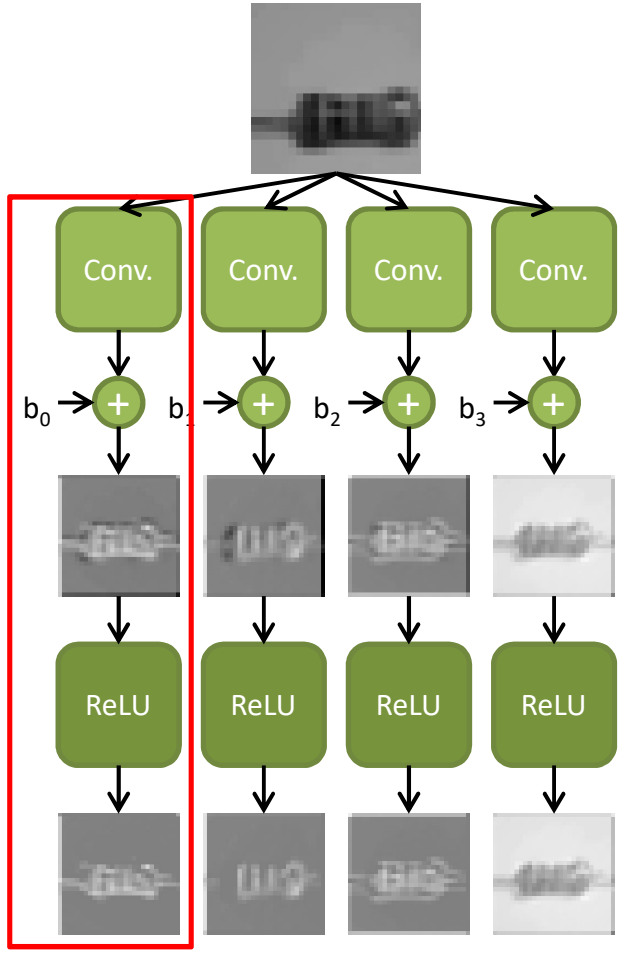
Sigmoid function



ReLU function







"neuron" or "node"

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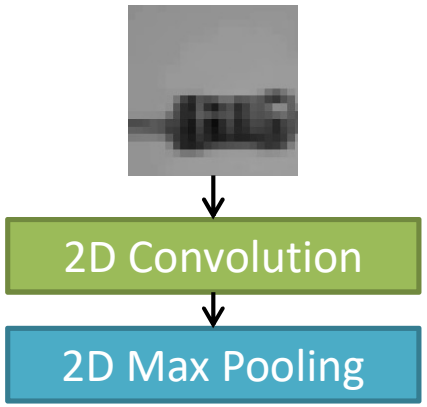
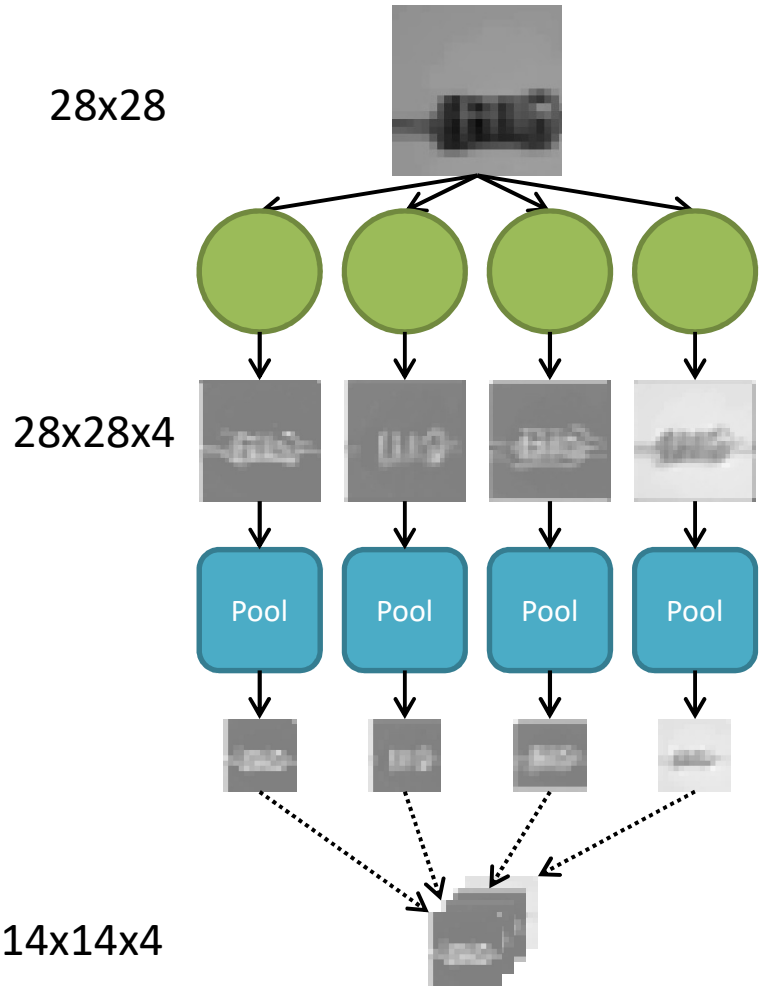


Shape: 2x2
Stride: 2



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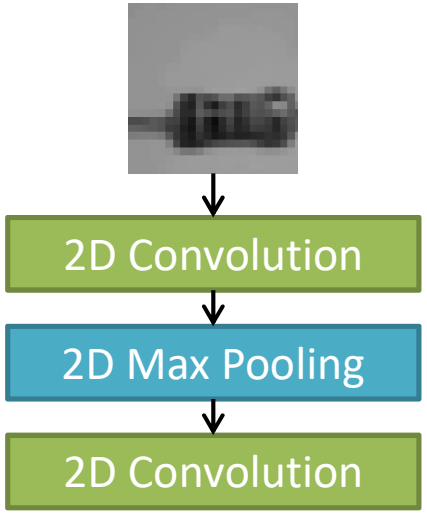
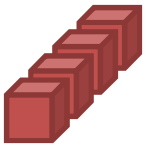
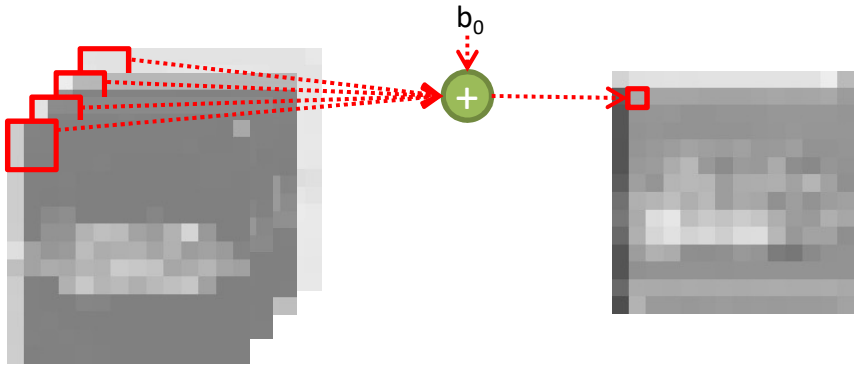
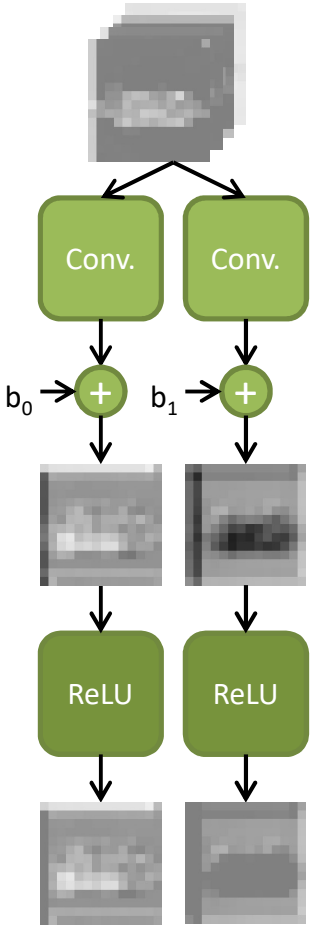


Number of filters: 2
Kernel: 3x3
Stride: 1
Padding: Same



Kernel: 3x3x4





14x14x4

14x14x2

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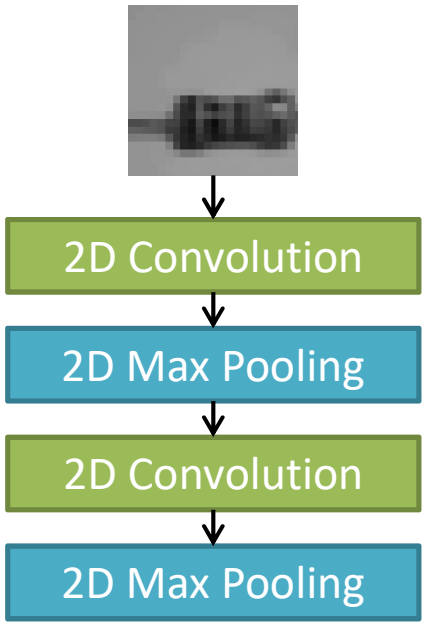
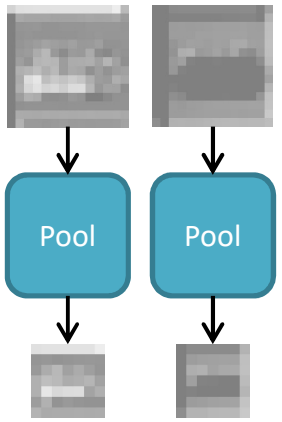


Shape: 2x2
Stride: 2



14x14x2

7x7x2

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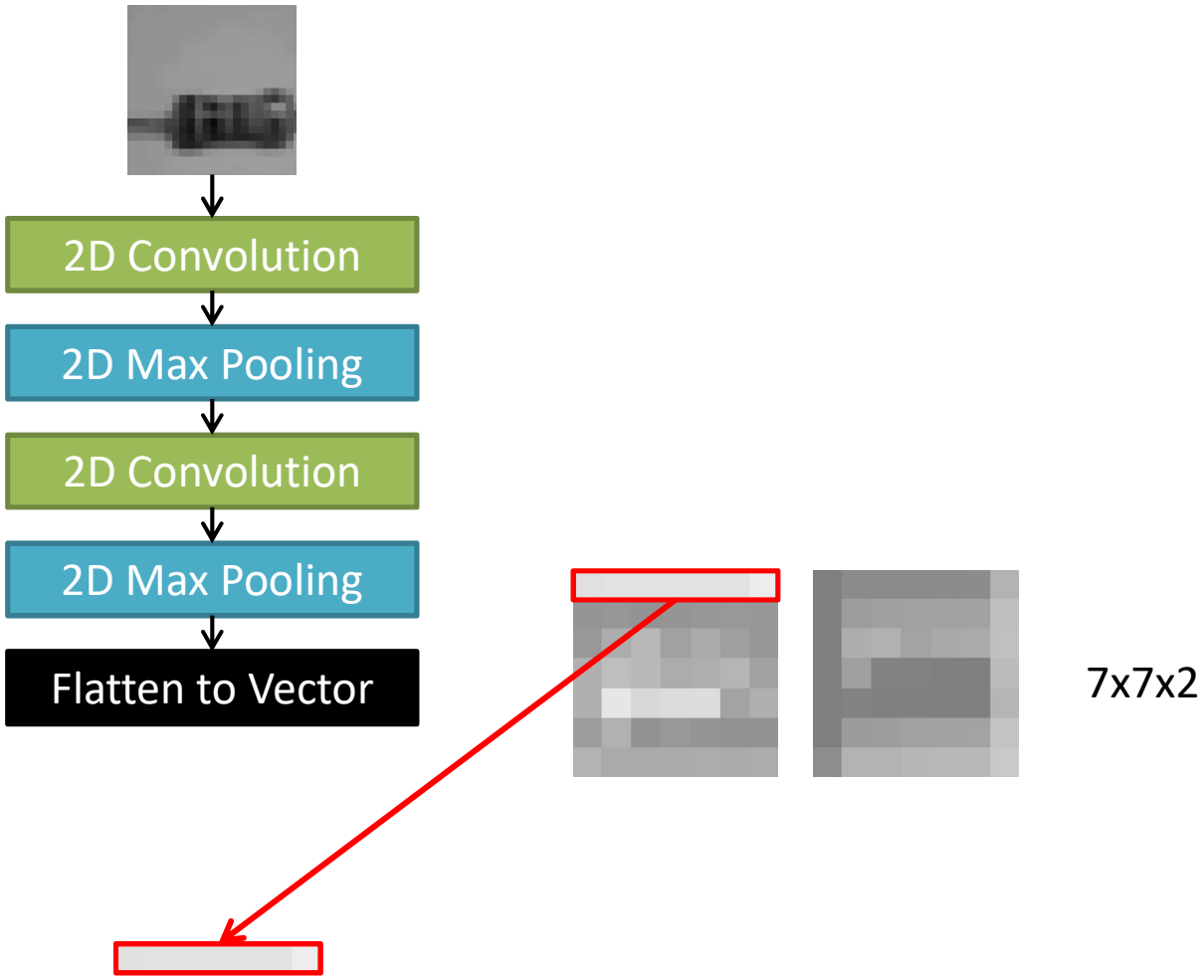

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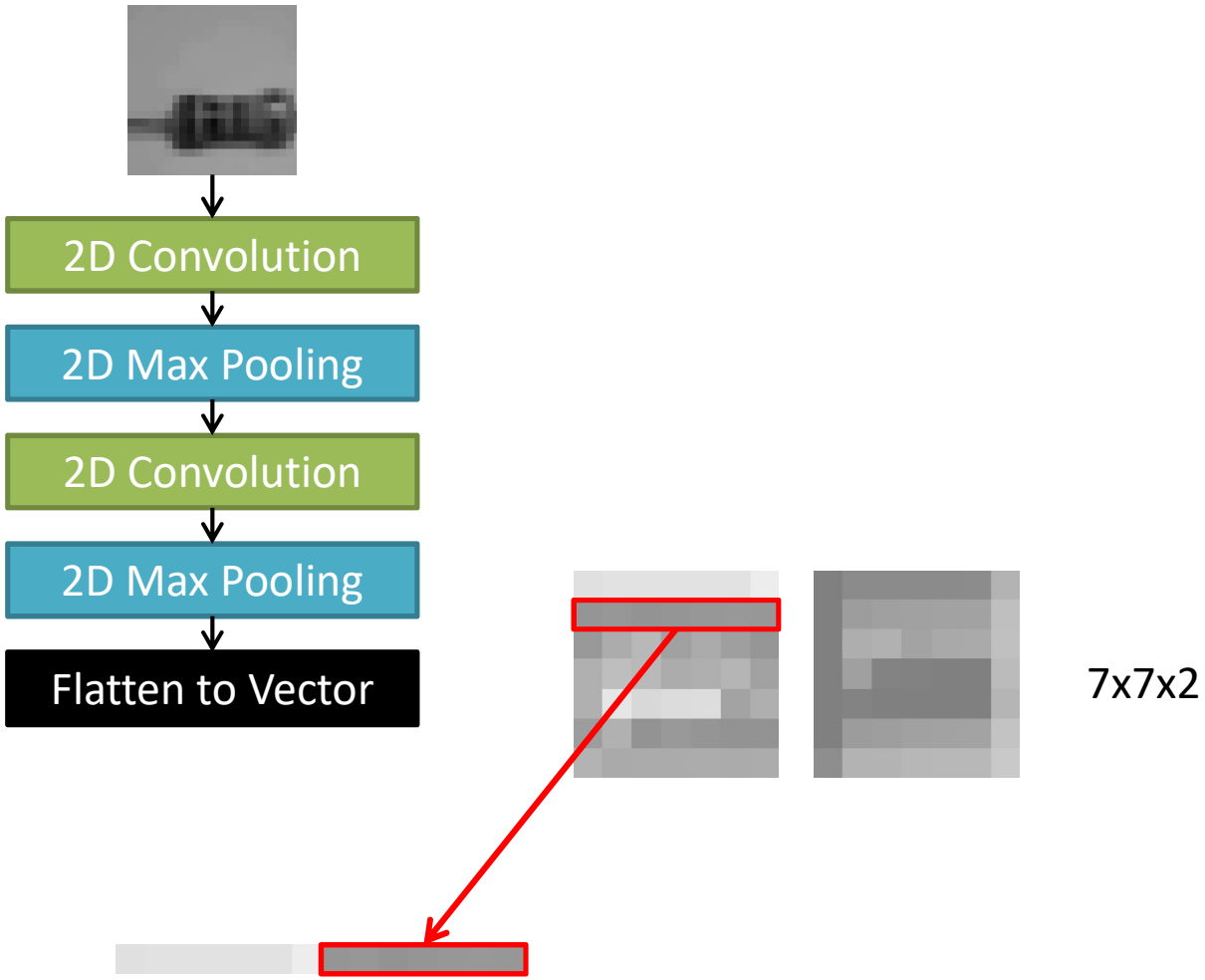

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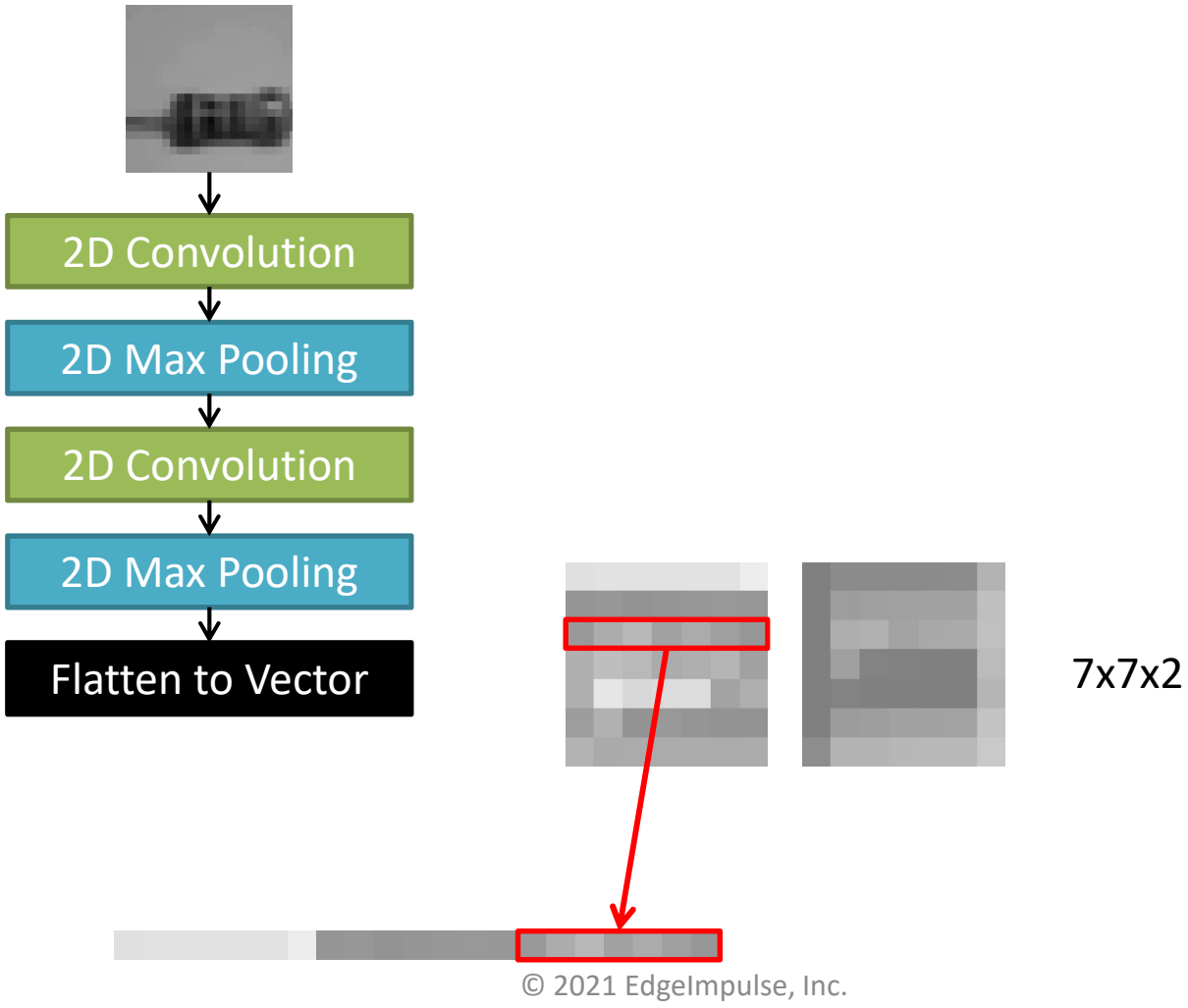

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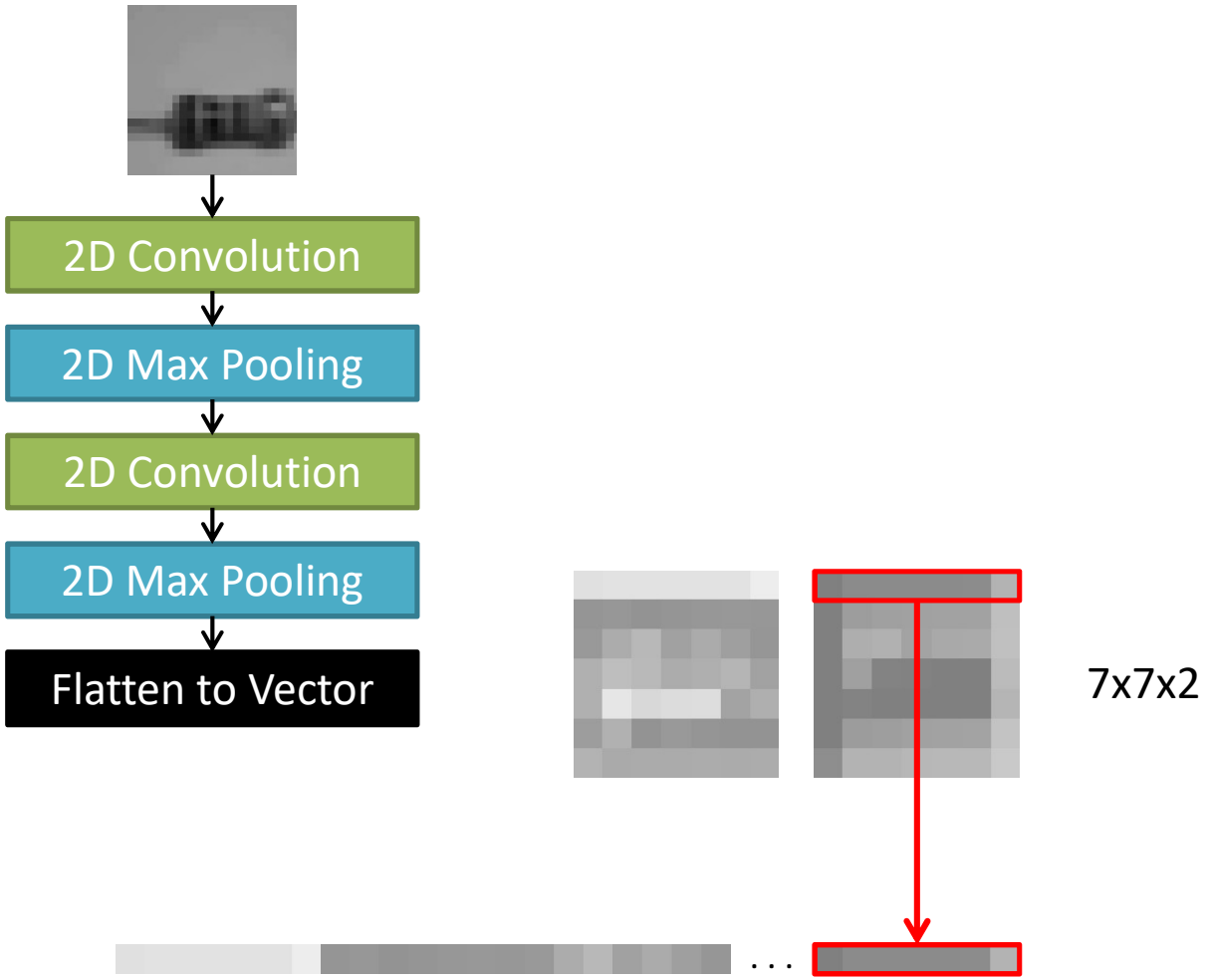

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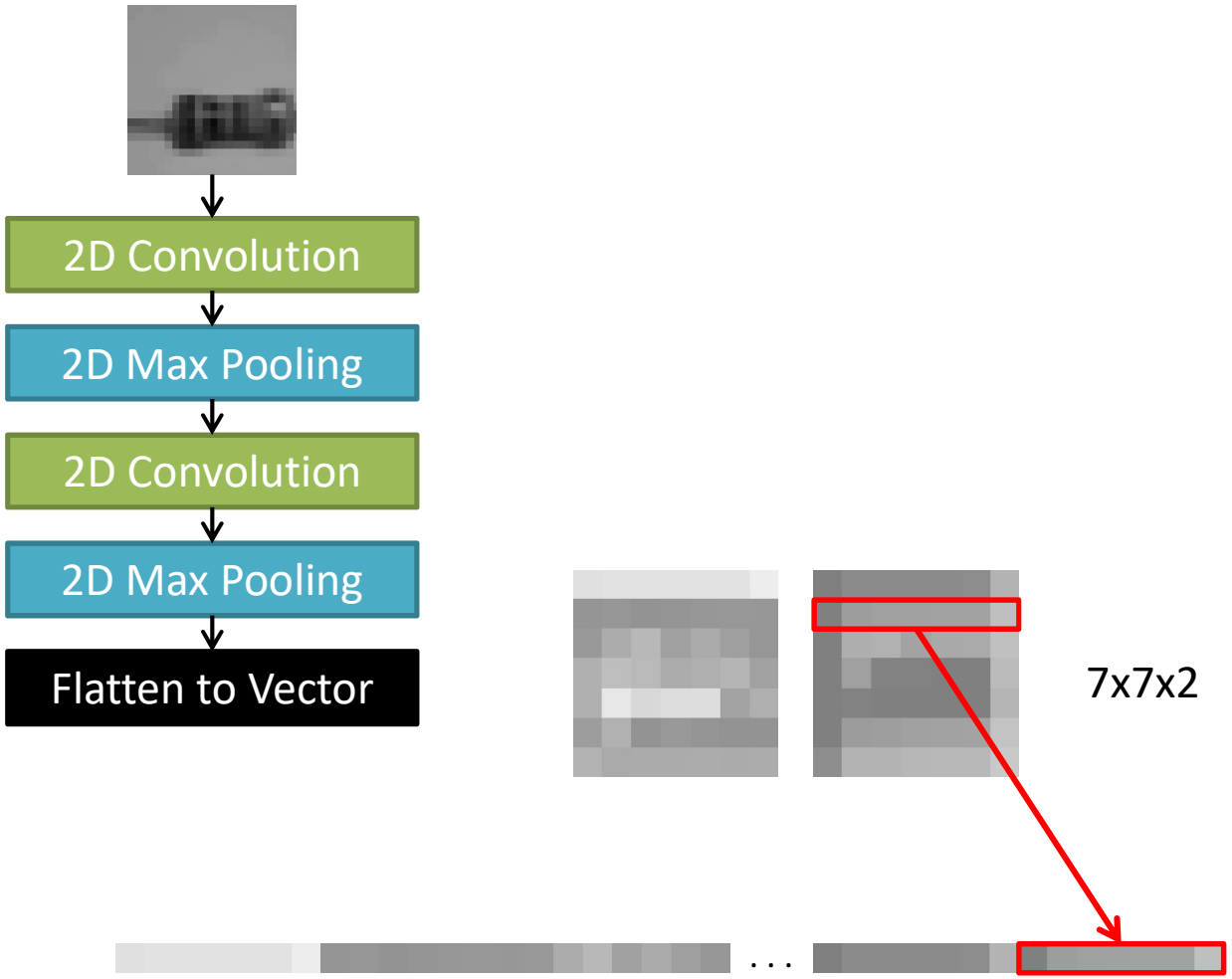

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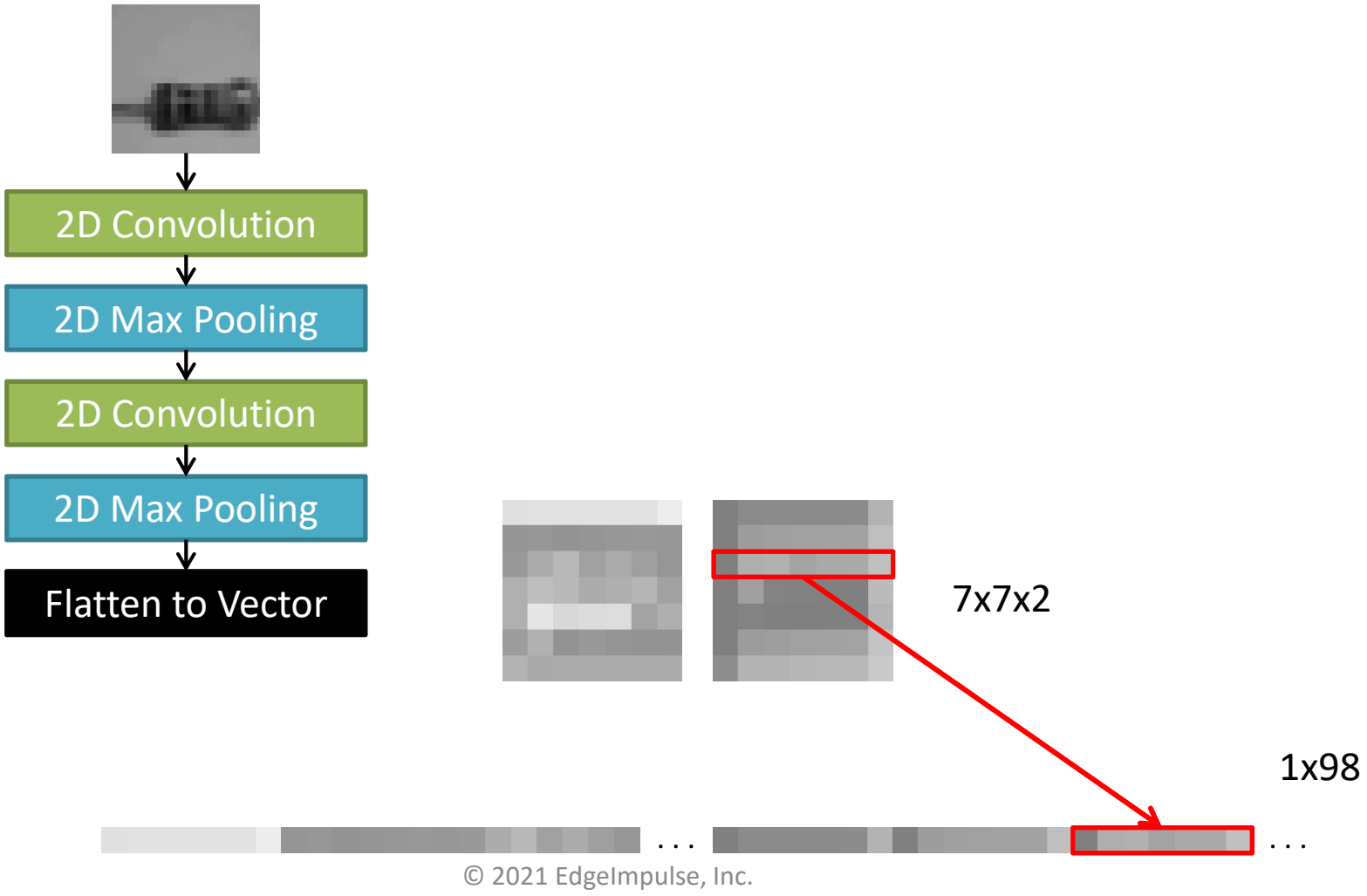

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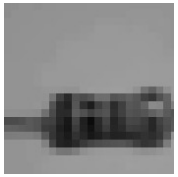
2D Convolution

2D Max Pooling

2D Convolution

2D Max Pooling

Flatten to Vector



Flatten original image: 28x28 = 784

1x98

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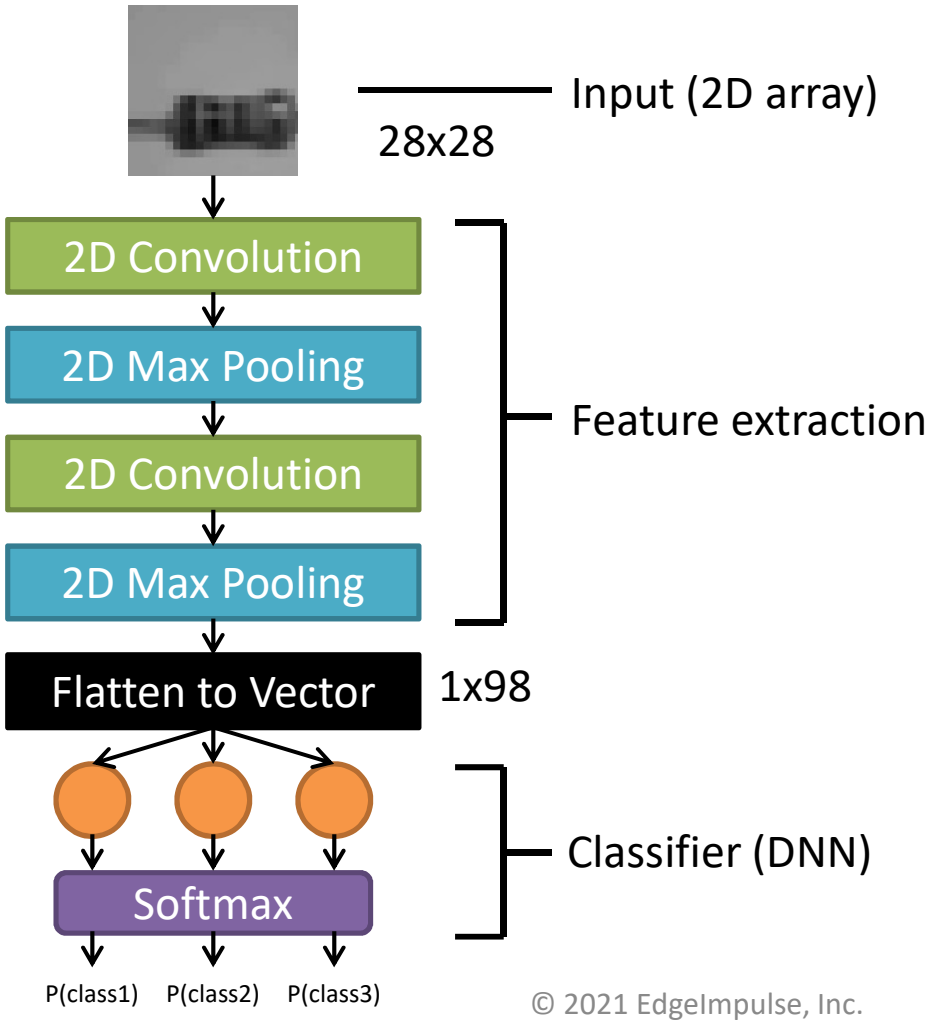

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