Module 8.6 : Parameter Sharing and tying

Other forms of regularization

- l_2 regularization
- Dataset augmentation
- Parameter Sharing and tying
- Adding Noise to the inputs
- Adding Noise to the outputs
- Early stopping
- Ensemble methods
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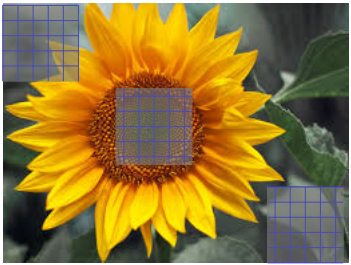
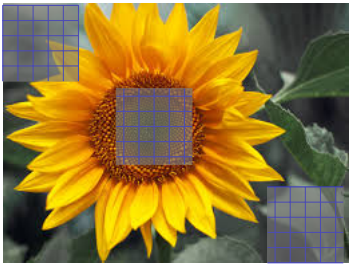
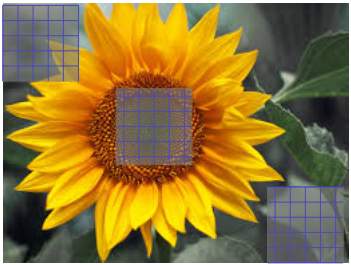


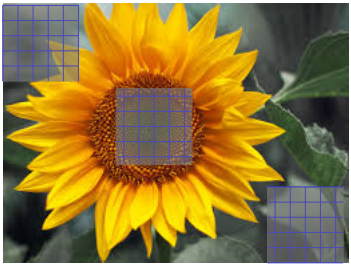


Parameter Sharing



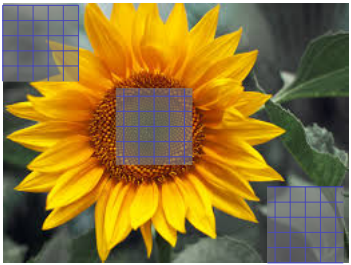
Parameter Sharing

- Used in CNNs



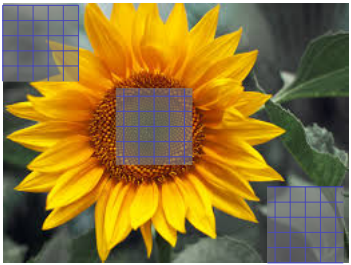
Parameter Sharing

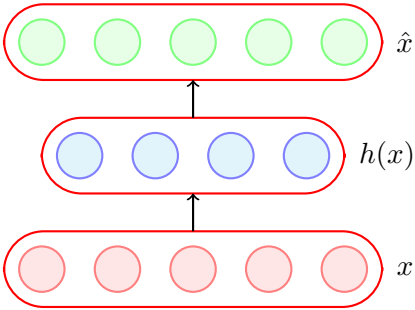
- Used in CNNs
- Same filter applied at different positions of the image



Parameter Sharing

- Used in CNNs
- Same filter applied at different positions of the image
- Or same weight matrix acts on different input neurons





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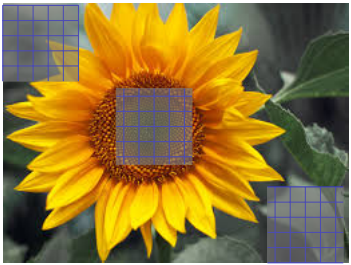

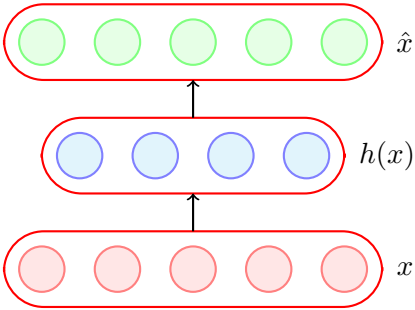

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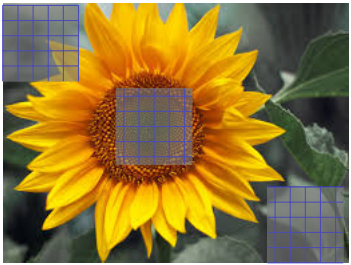
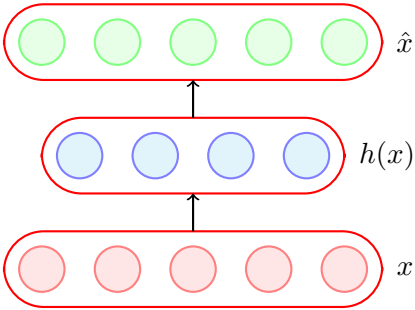
Parameter Tying





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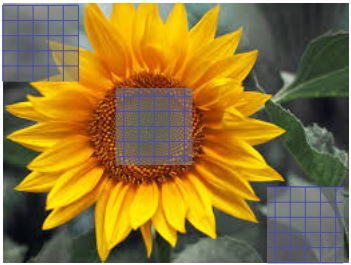
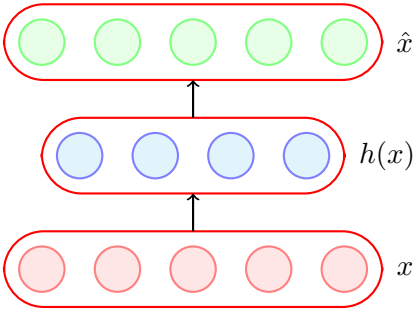
Parameter Tying

- Typically used in autoencoders





Parameter Sharing

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- Same filter applied at different positions of the image
- Or same weight matrix acts on different input neurons

Parameter Tying

- Typically used in autoencoders
- The encoder and decoder weights are tied.