Stride & Dilation

Dr. Alireza Aghamohammadi

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Stride, Kernel Size, and Dilation in Convolutions

Stride

- **Definition:** Controls kernel movement across input data.
- **Stride of One:** Evaluates output at every position.
- **Stride of Two:** Evaluates output at every other position.

Kernel Size

- **Larger Kernel:** Integrates over a larger area.
- **Trade-off:** Requires more weights.

Dilated Convolutions

- **Concept:** Kernel values spaced out with zeros.
- **Advantage:** Covers a larger receptive field without increasing the number of weights proportionally.

Illustration of Stride, Kernel Size, and Dilation

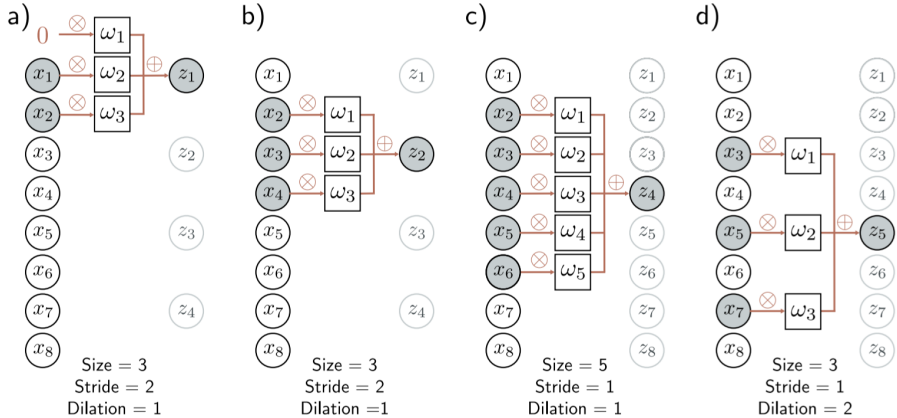

Figure: Stride, Kernel Size, and Dilation[1]

[1]Adapted from the book "Understanding Deep Learning."