

# Comparing Scaled-YOLOv4 & YOLOv7

## TensorFlow Model Garden

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# Outline

① Overview

② Architecture

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- d. Scaled-YOLOv4 aims to find a method for *synergistic compound scaling* (translation:  $\pm$  stages) based on design requirements for object-detection based tasks.



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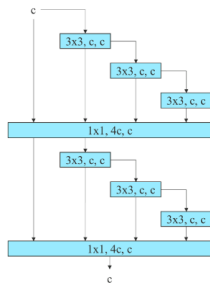
Both Scaled-YOLOv4 and YOLOv7 build upon neural scaling as a method for improving inference speed and accuracy.

# Outline

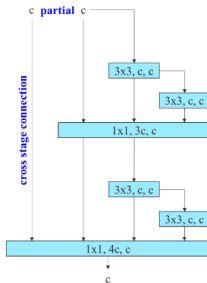
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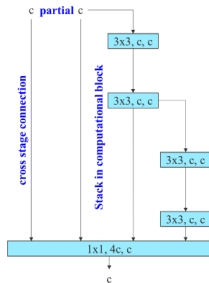
# Comparing Architectures



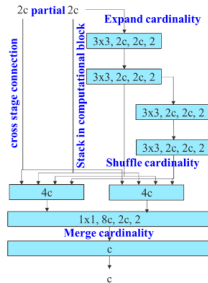
(a) VoVNet [39]



(b) CSPVoVNet [79]

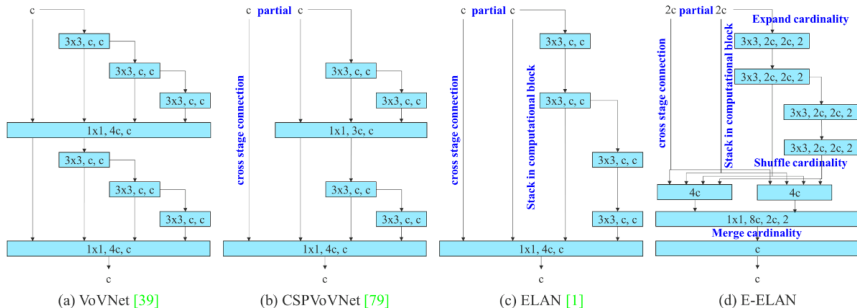


(c) ELAN [1]



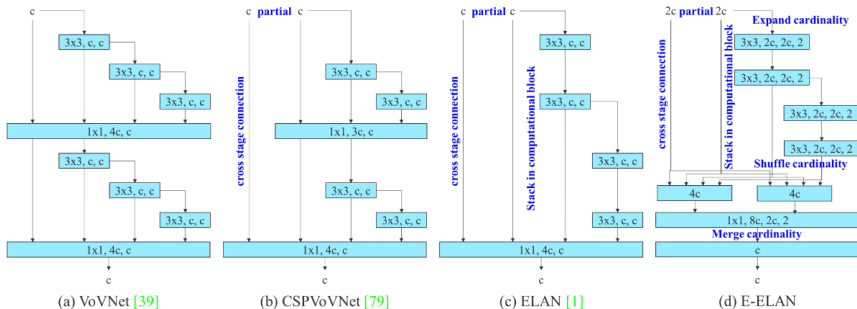
(d) E-ELAN

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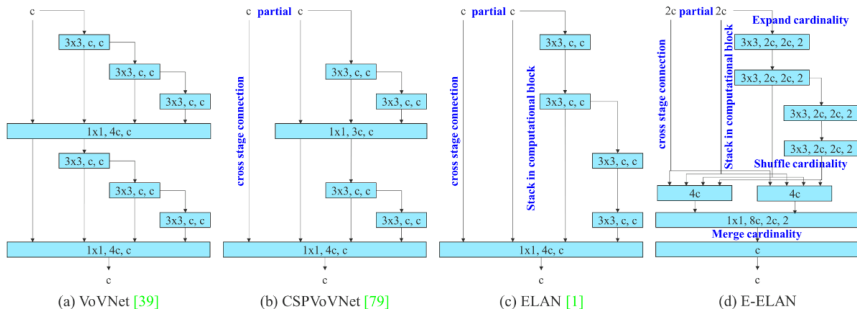
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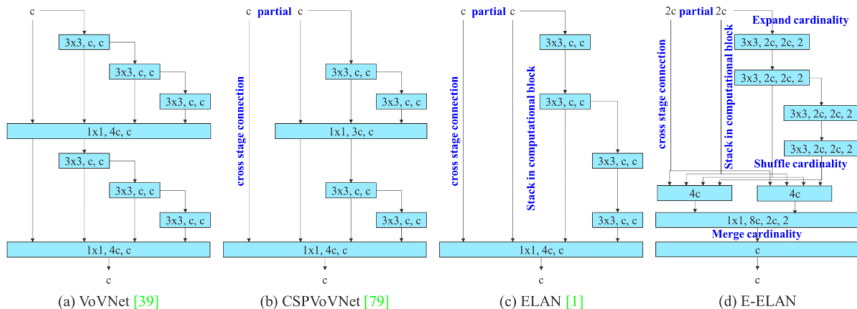
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- **E-ELAN**: Group convolution to increase cardinality.

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- The lead head has a relatively strong learning capability; the auxilliary head eases it so that it can focus on learning residual information.



# Thank you!

That's all I've got; have an awesome rest of your day!