Neural Style Transfer

What are deep ConvNets learning?

Visualizing what a deep network is learning

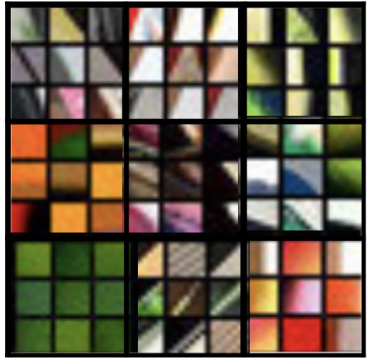224×224×3   110×110×96   55×55×96   26×26×256   13×13×256   13×13×384   13×13×384   6×6×256   FC 4096   FC 4096 $\hat{y}$
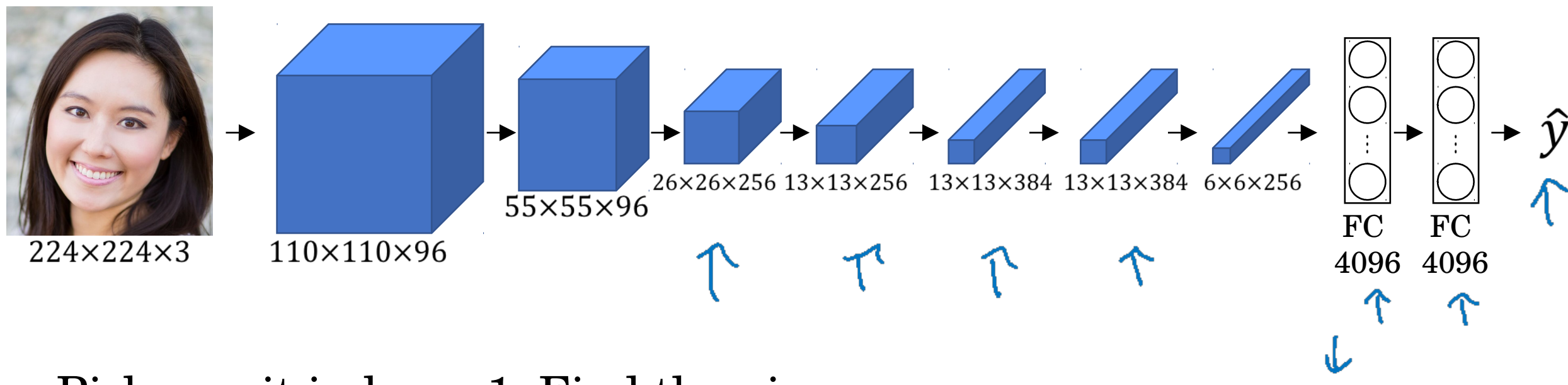
Pick a unit in layer 1. Find the nine image patches that maximize the unit's activation.

Repeat for other units.

[Zeiler and Fergus., 2013, Visualizing and understanding convolutional networks]   Andrew Ng
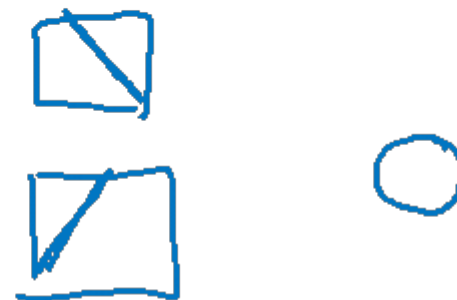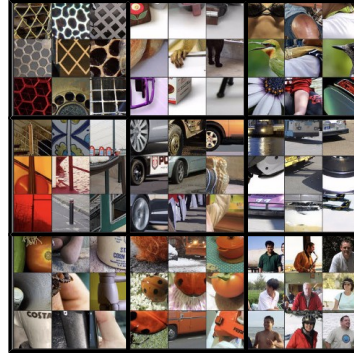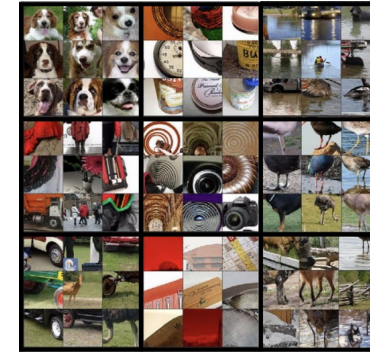
Visualizing deep layers

Layer 1   Layer 2   Layer 3   Layer 4   Layer 5

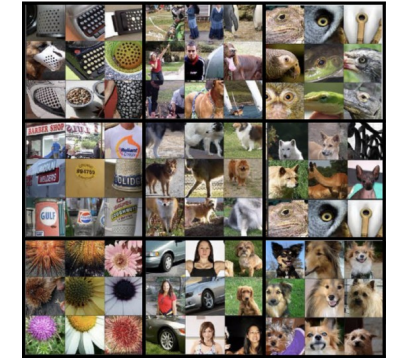Andrew Ng
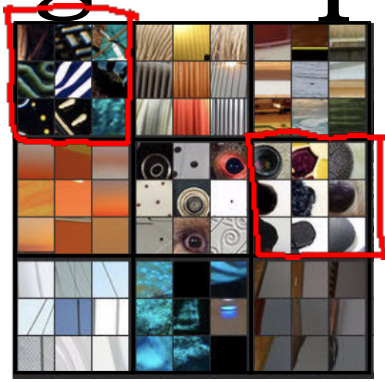
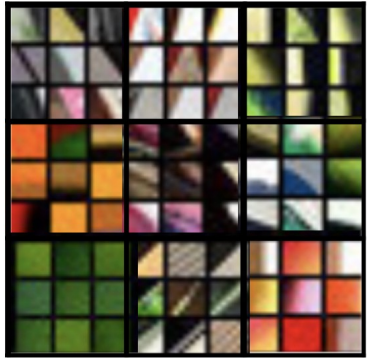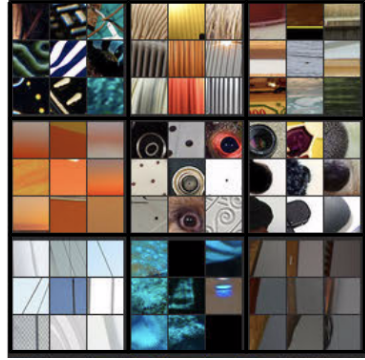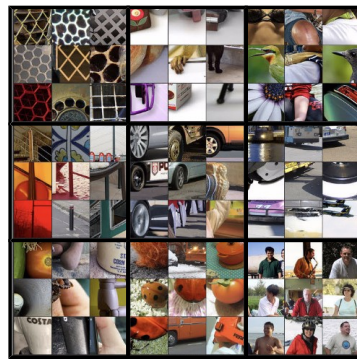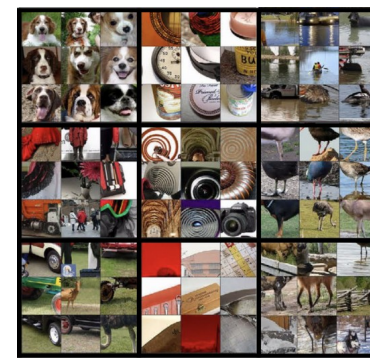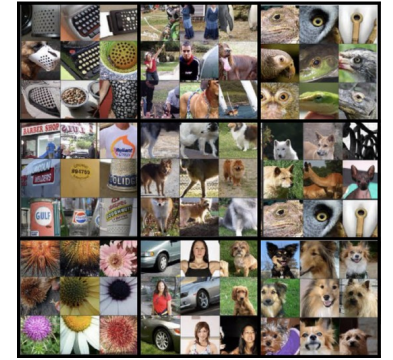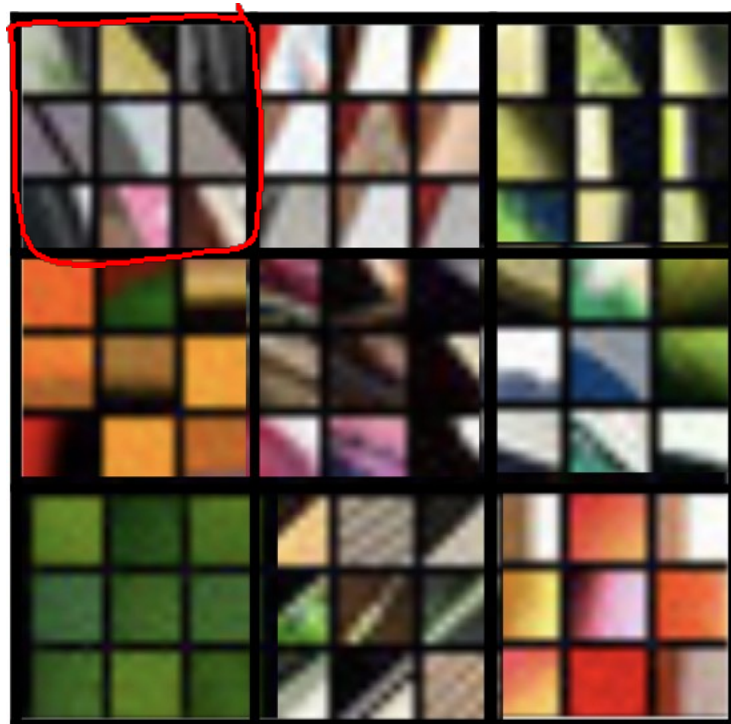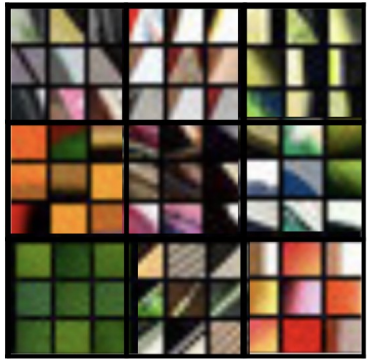# Visualizing deep layers: Layer 1
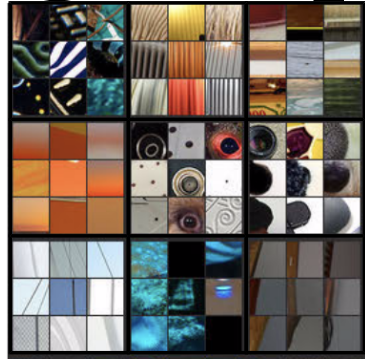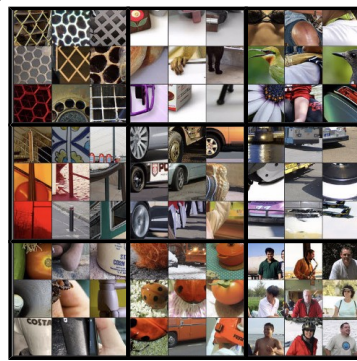

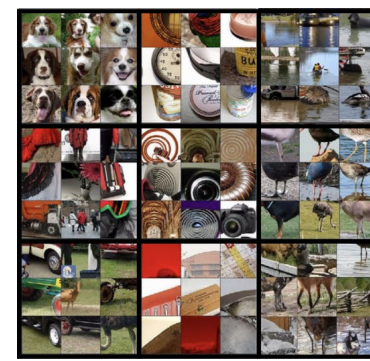Layer 1   Layer 2   Layer 3   Layer 4   Layer 5
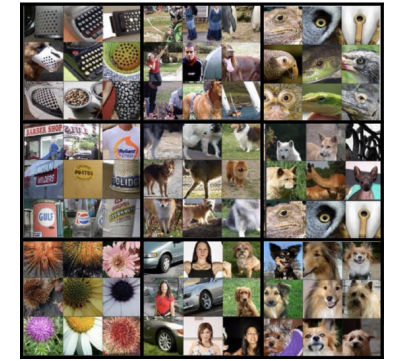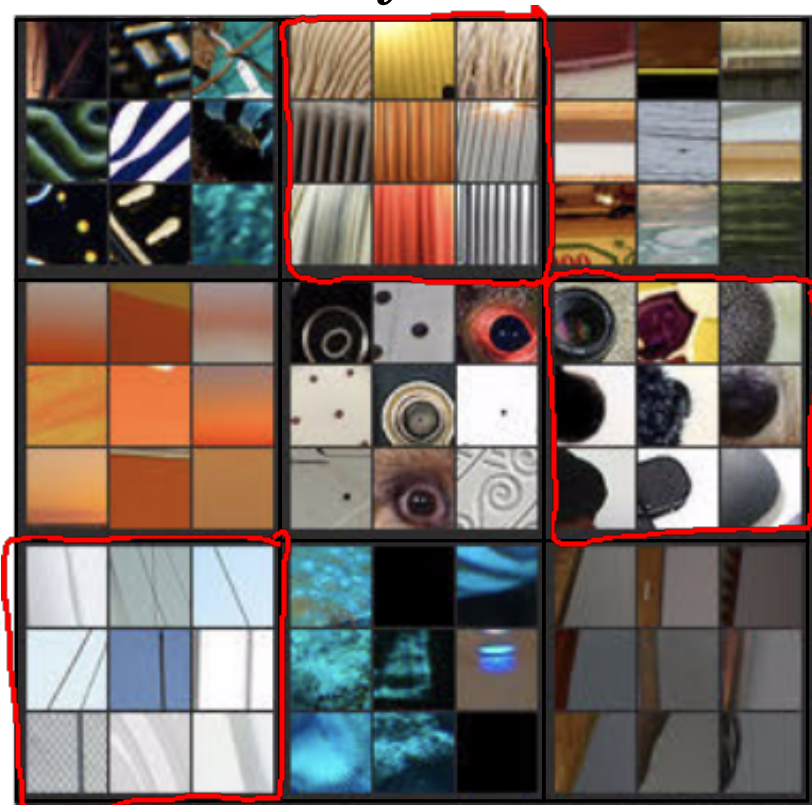
Visualizing deep layers: Layer 2

Layer 1 Layer 2 Layer 3 Layer 4 Layer 5

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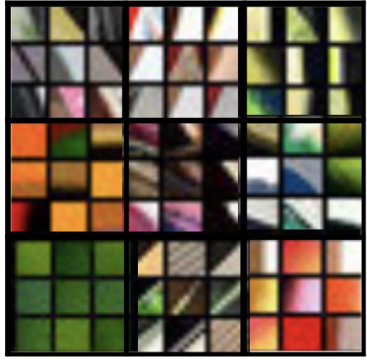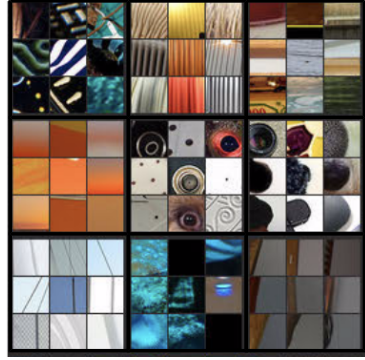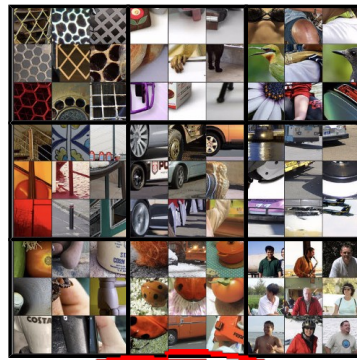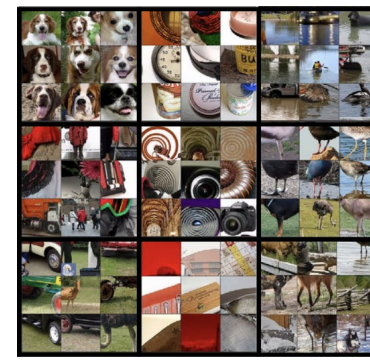# Visualizing deep layers: Layer 3

Layer 1   Layer 2   Layer 3   Layer 4   Layer 5

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Visualizing deep layers: Layer 3

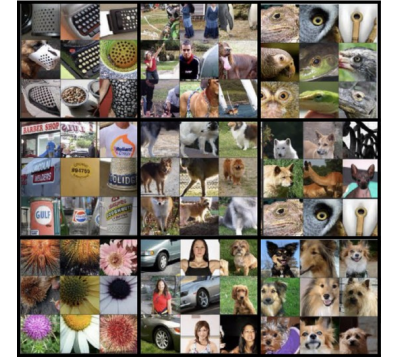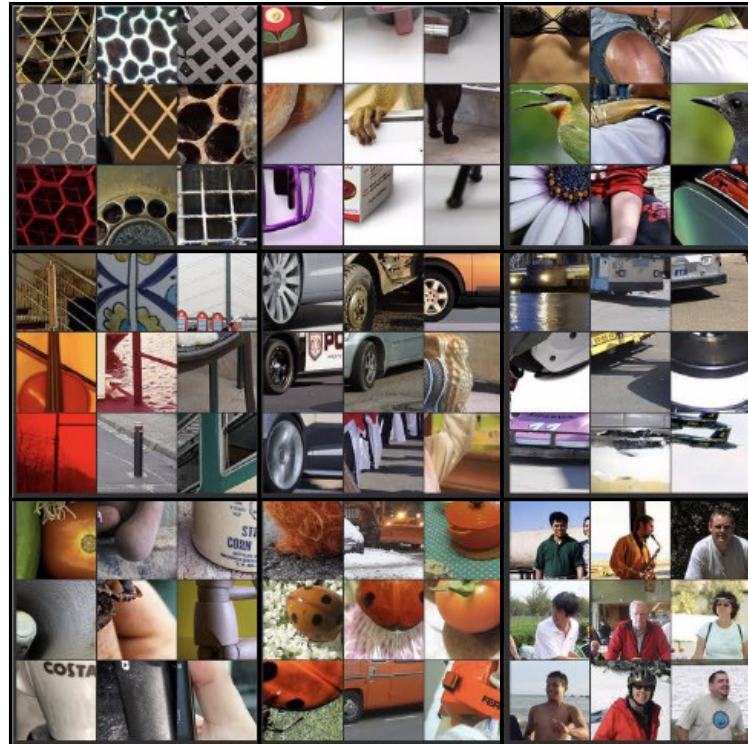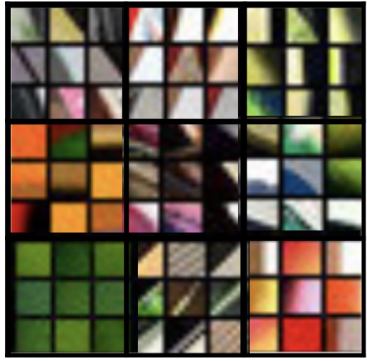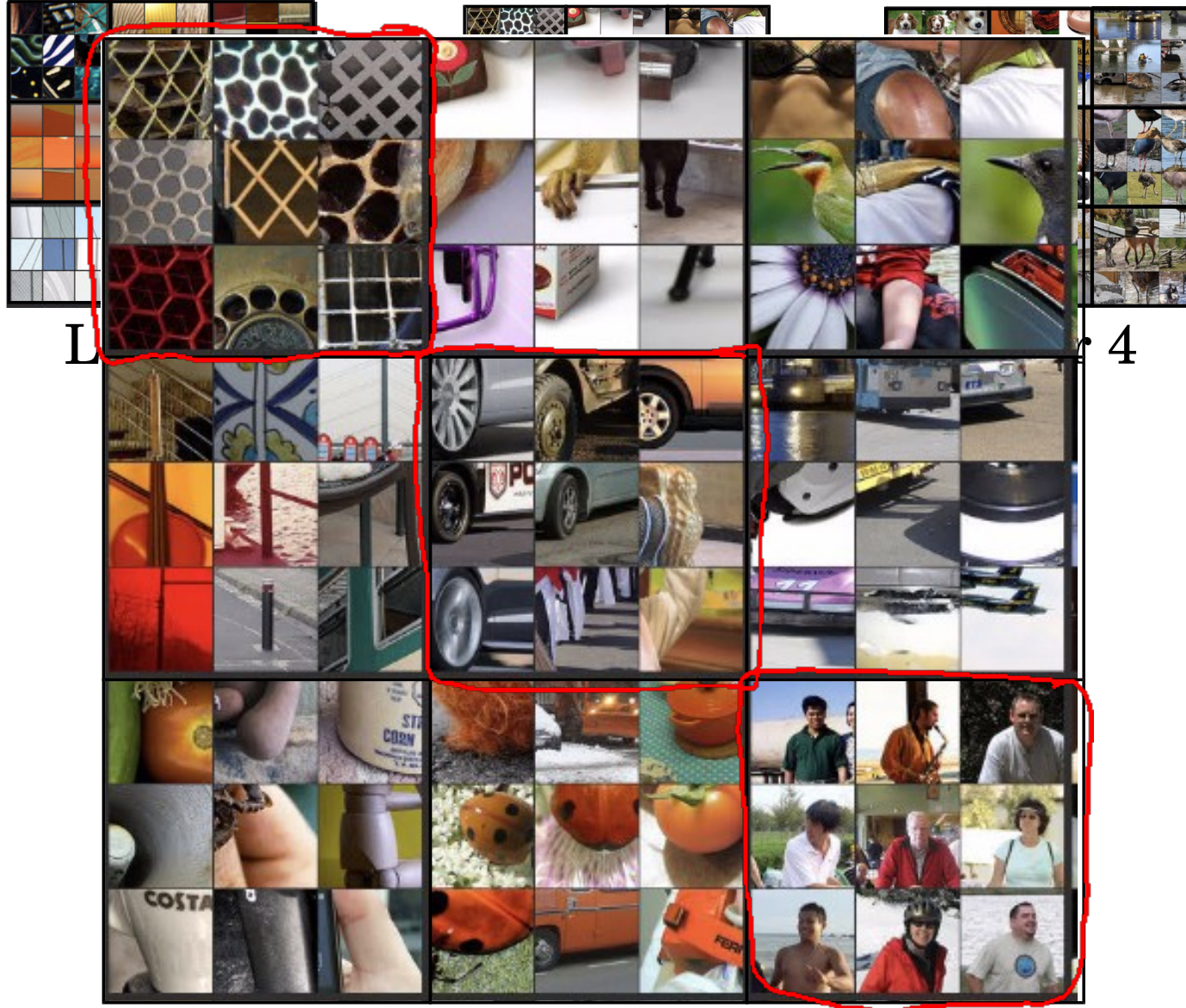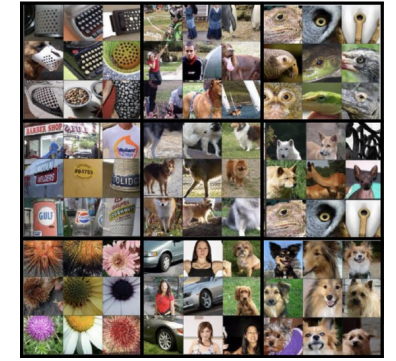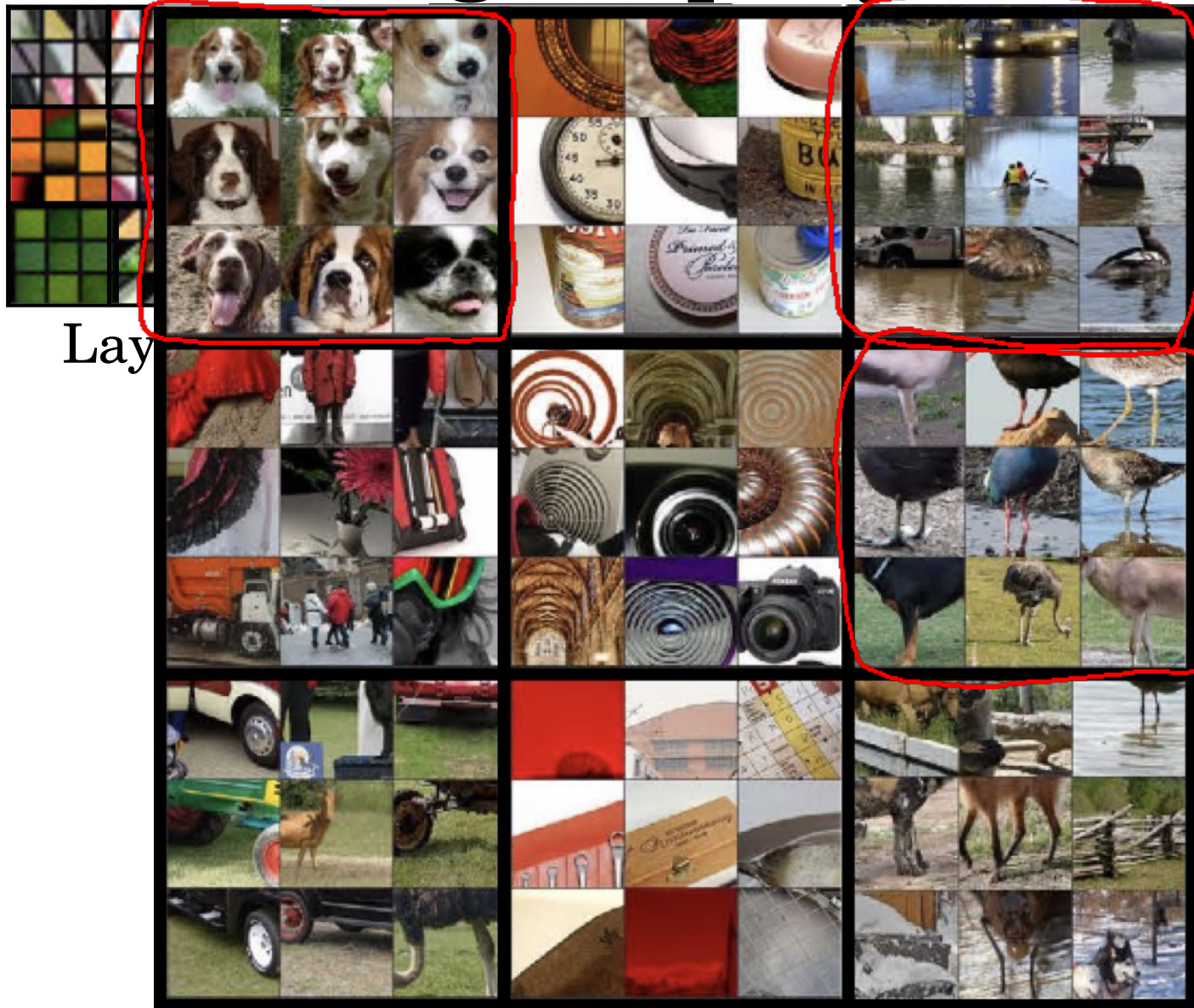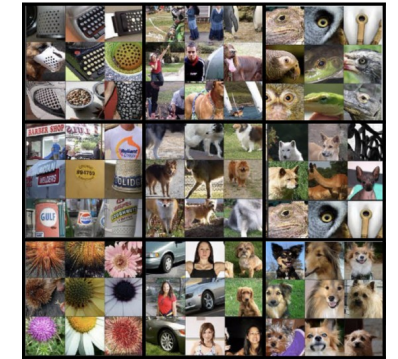Layer 1   Layer 2   Layer 4   Layer 5

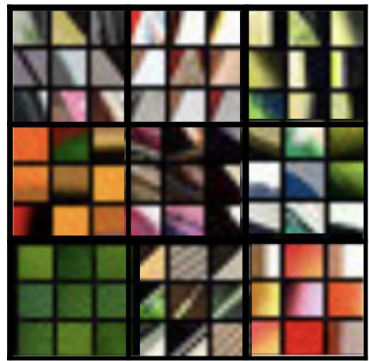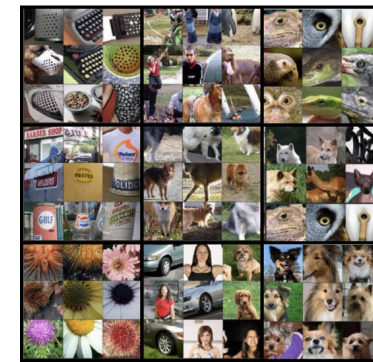# Visualizing deep layers: Layer 4

Layer 4

Layer 5

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Visualizing deep layers: Layer 5

Layer 1

Layer 5

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