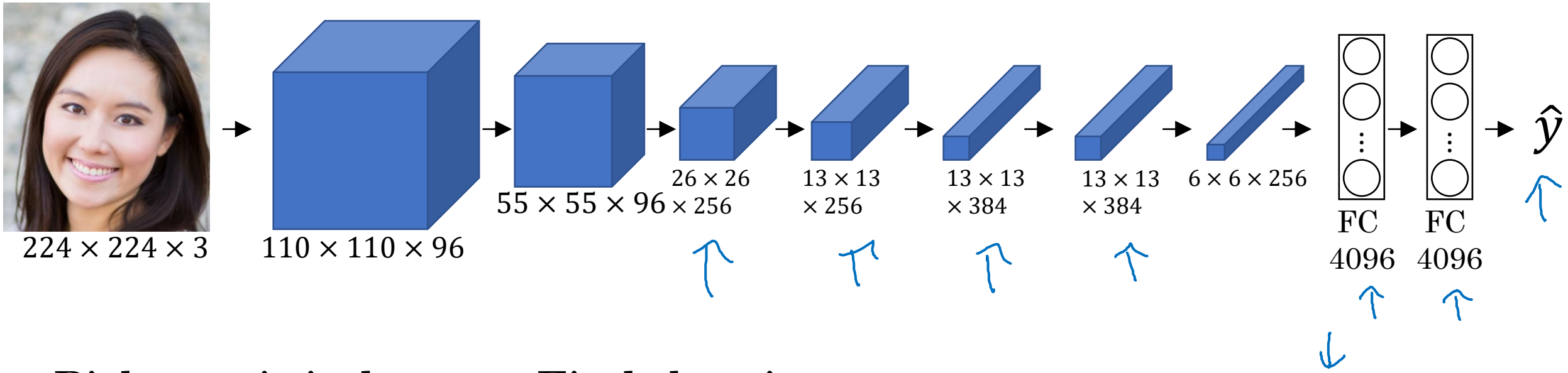
deeplearning.ai

Neural Style Transfer

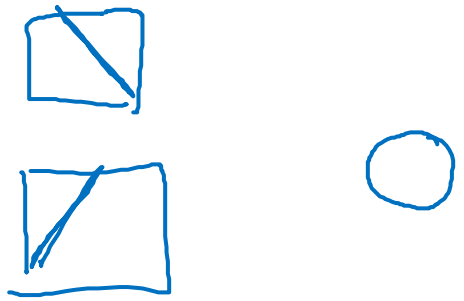
What are deep ConvNets learning?

Visualizing what a deep network is learning



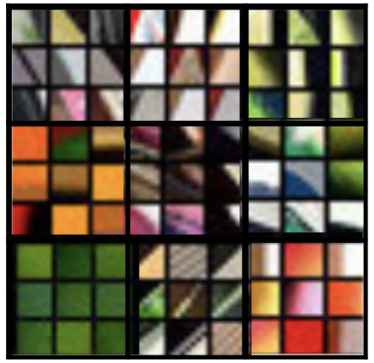
Pick a unit in layer 1. Find the nine image patches that maximize the unit's activation.

Repeat for other units.

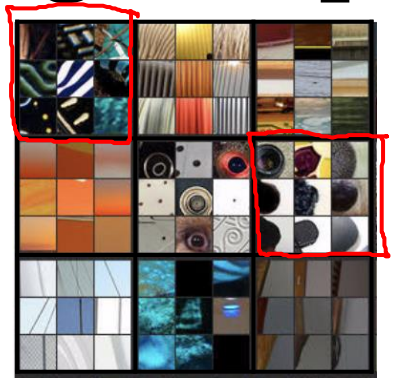


[Zeiler and Fergus., 2013, Visualizing and understanding convolutional networks]

Visualizing deep layers

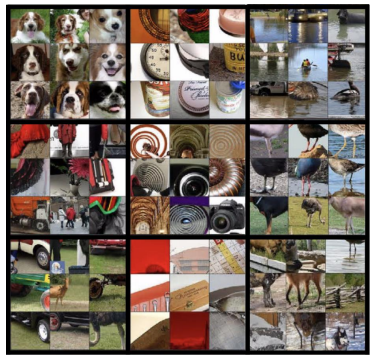


Layer 1

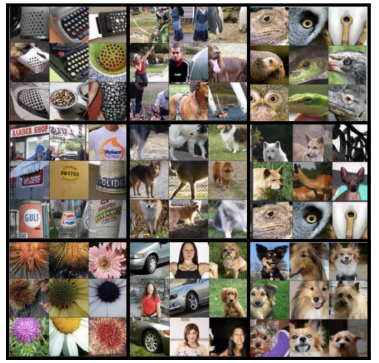


Layer 2

Layer 3

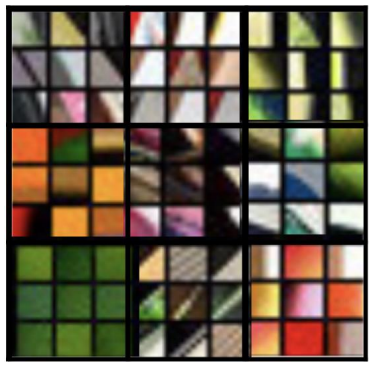


Layer 4

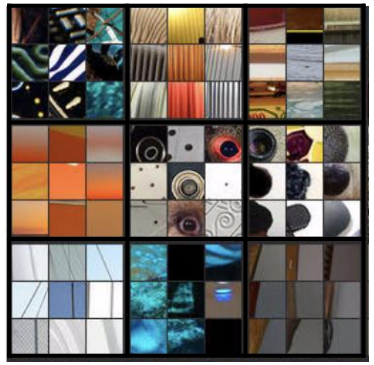


Layer 5

Visualizing deep layers: Layer 1

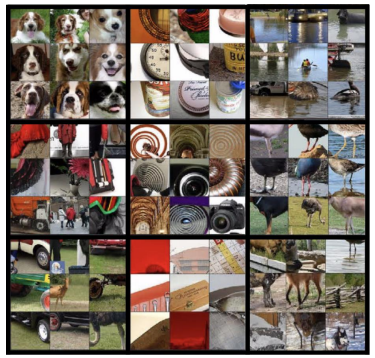


Layer 1

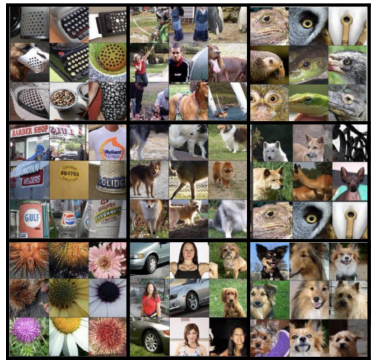


Layer 2

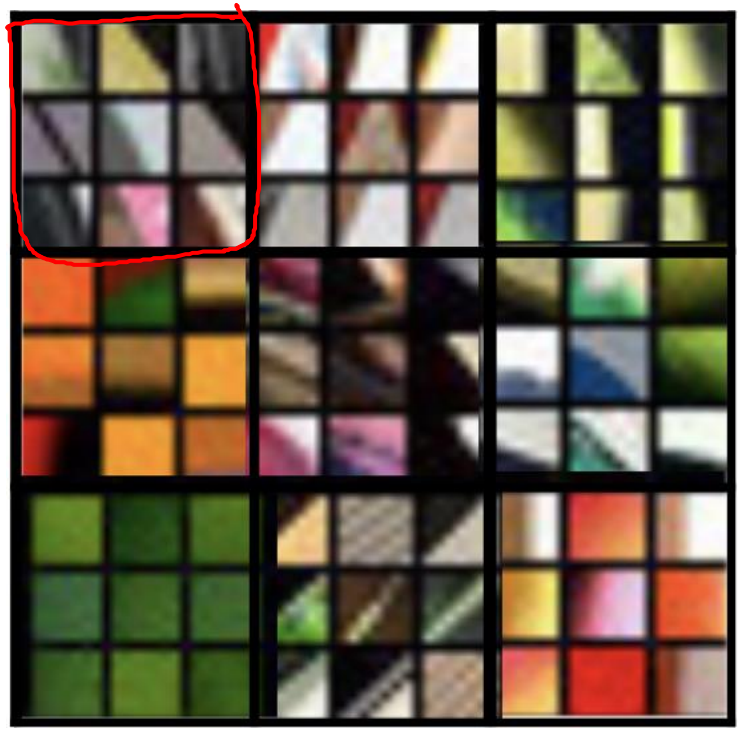
Layer 3



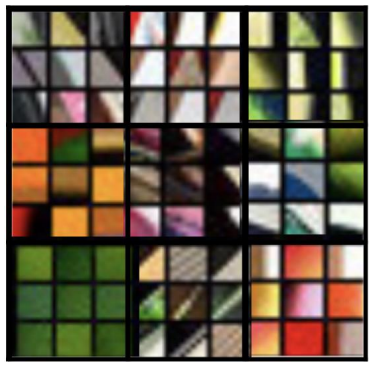
Layer 4



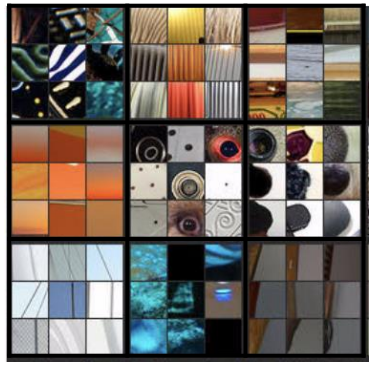
Layer 5



Visualizing deep layers: Layer 2

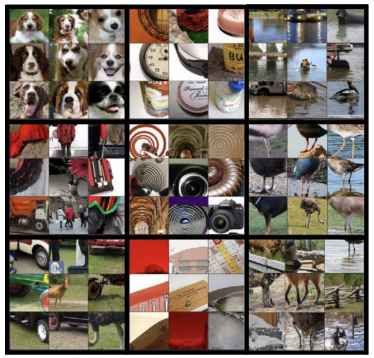


Layer 1

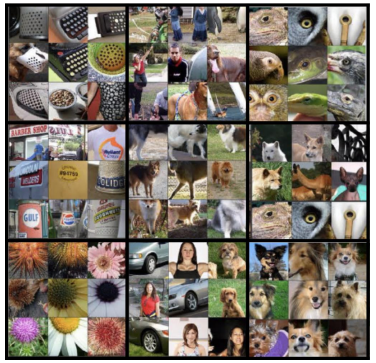


Layer 2

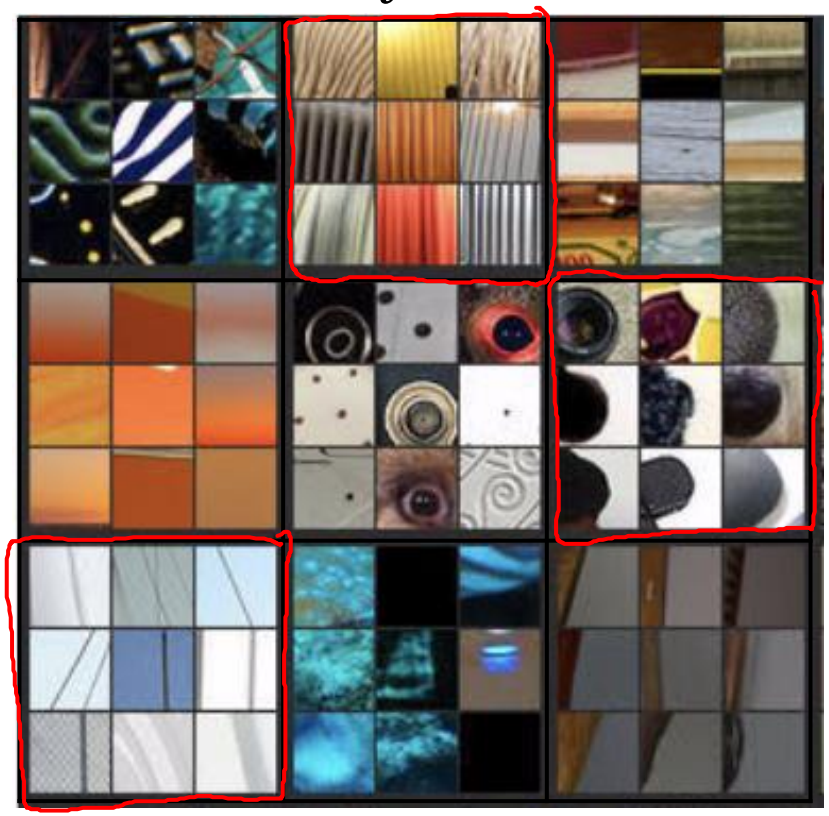
Layer 3



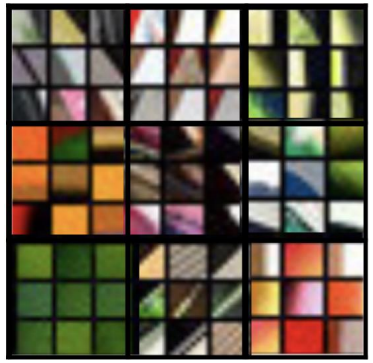
Layer 4



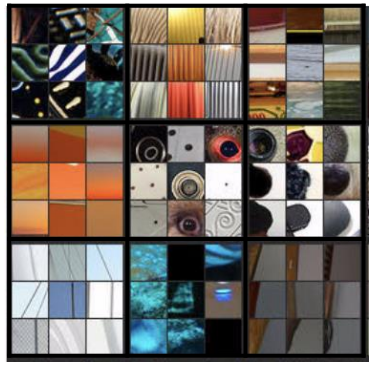
Layer 5



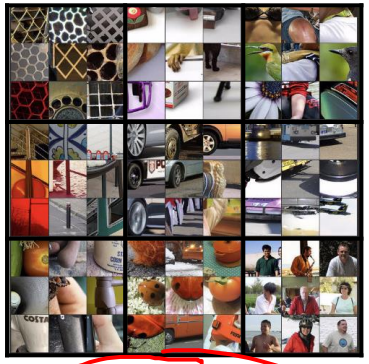
Visualizing deep layers: Layer 3



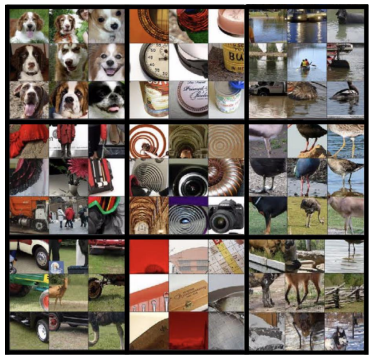
Layer 1



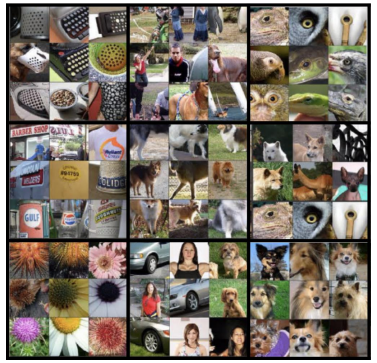
Layer 2



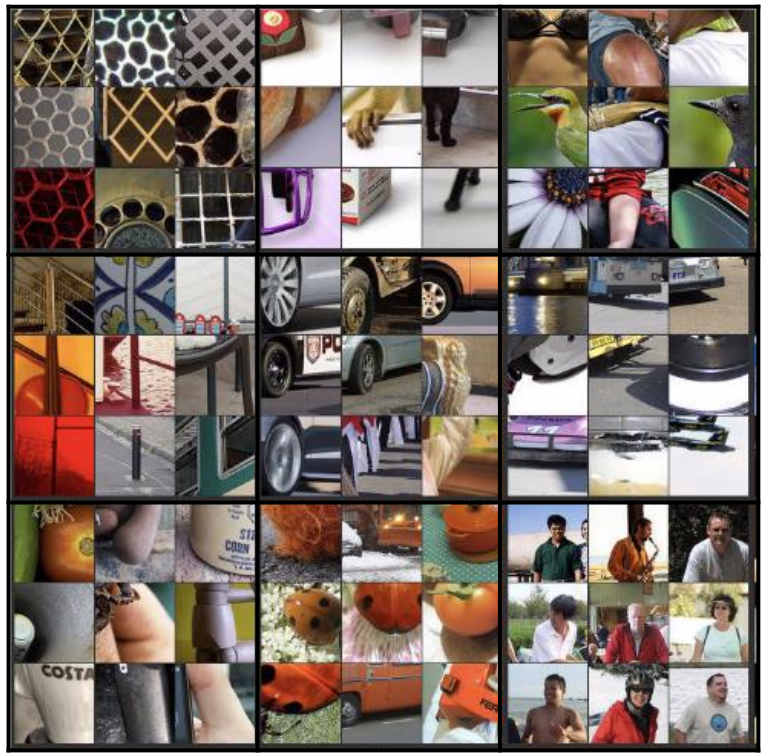
Layer 3



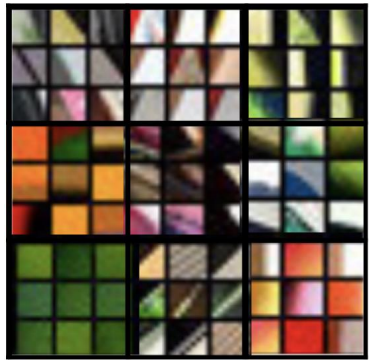
Layer 4



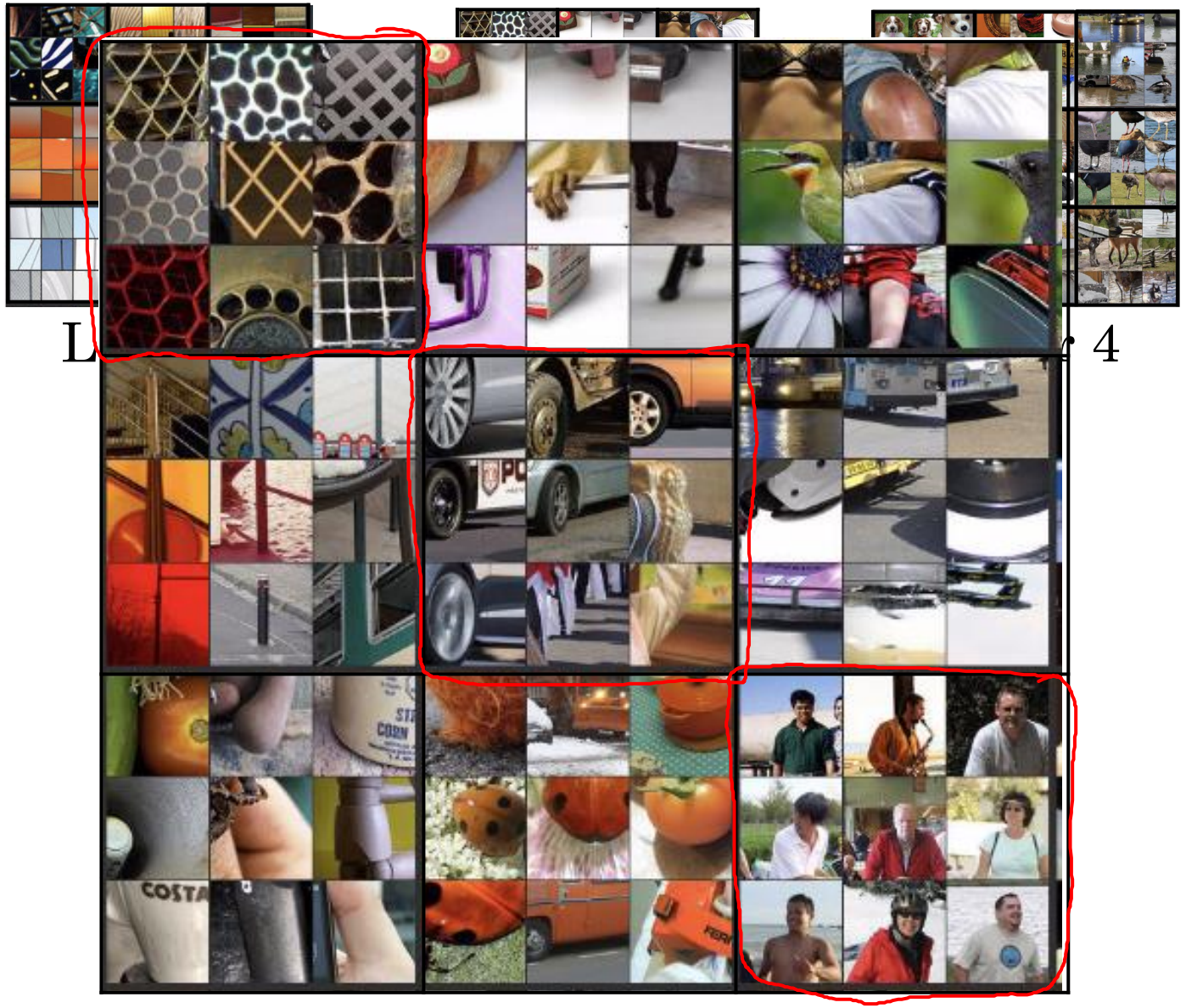
Layer 5

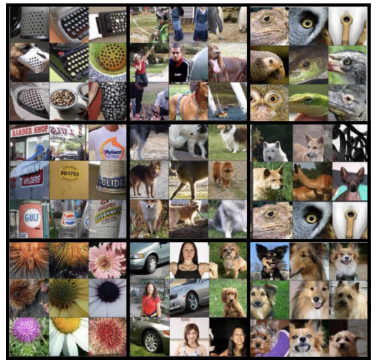


Visualizing deep layers: Layer 3



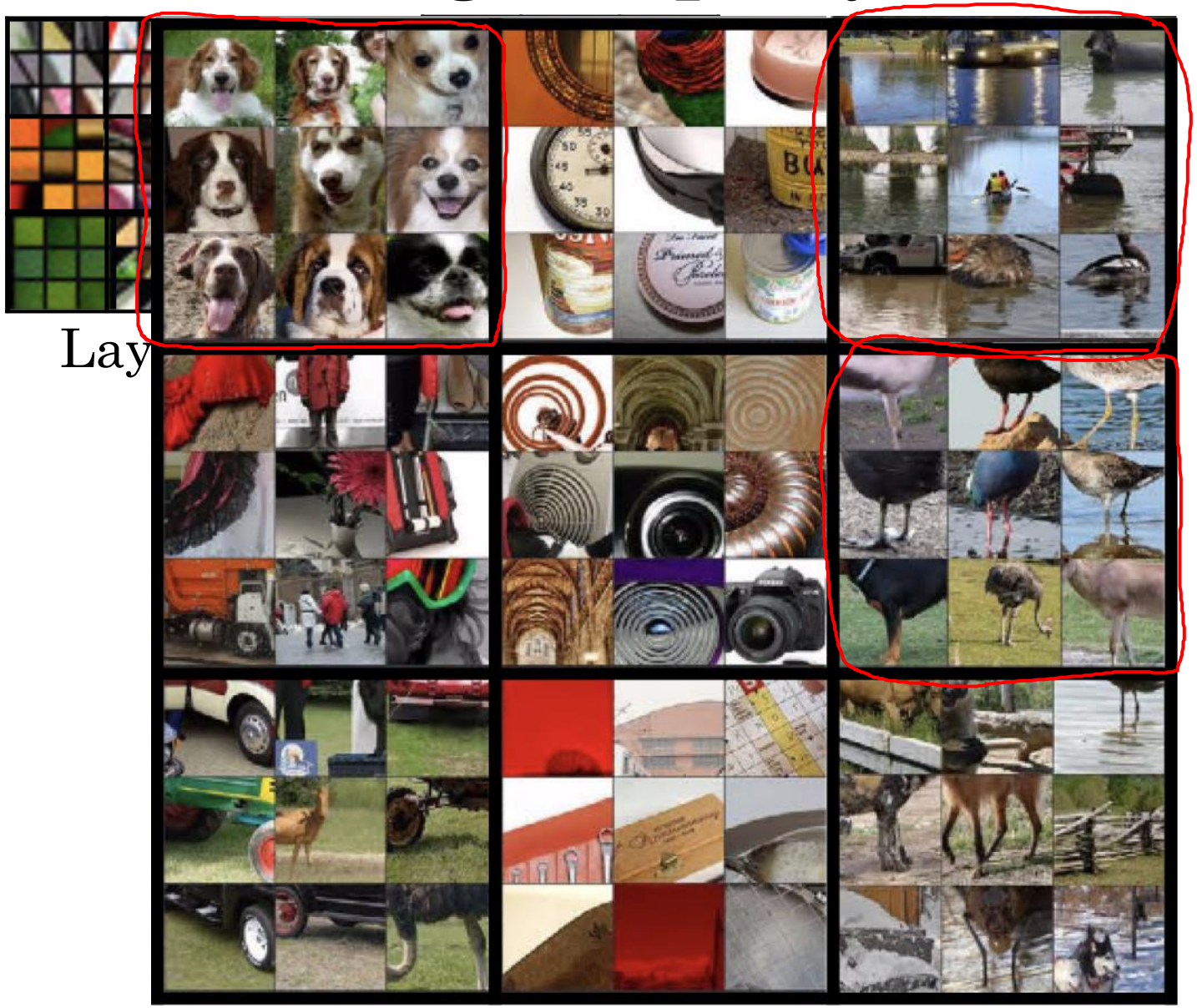
Layer 1



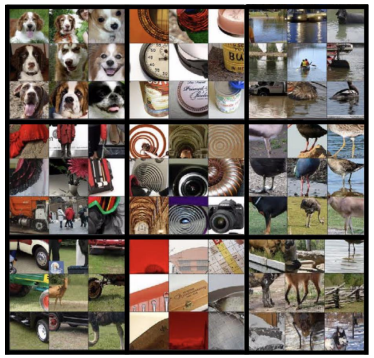


Layer 5

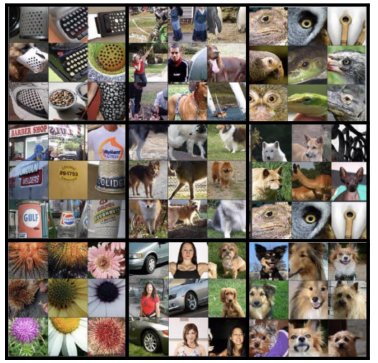
Visualizing deep layers: Layer 4



Lay

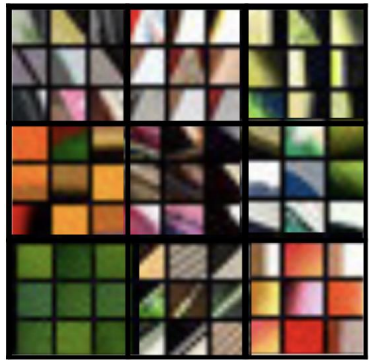


Layer 4

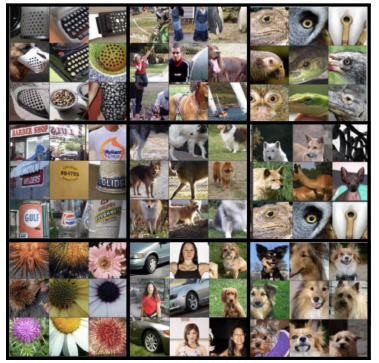


Layer 5

Visualizing deep layers: Layer 5



Layer 1



Layer 5

Andrew Ng