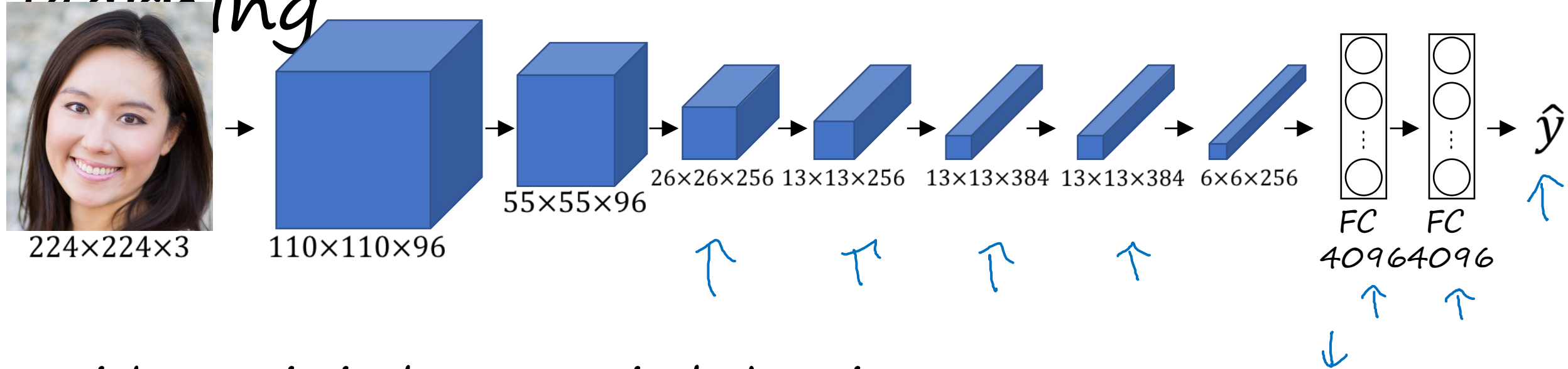deeplearning.ai

Neural Style Transfer
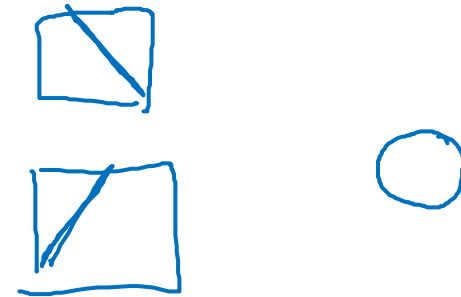
What are deep ConvNets learning?

Visualizing what a deep network is learning
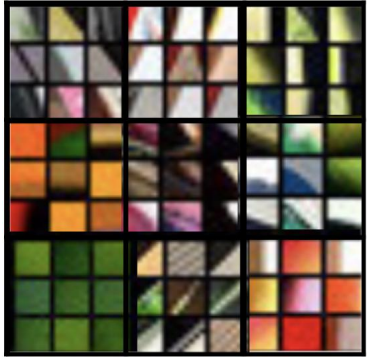

224×224×3 110×110×96 55×55×96 26×26×256 13×13×256 13×13×384 13×13×384 6×6×256 FC 4096 FC 4096 $\hat{y}$

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

Repeat for other units.

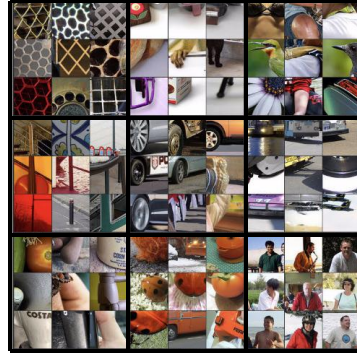[Zeiler and Fergus., 2013, Visualizing and understanding convolutional networks]
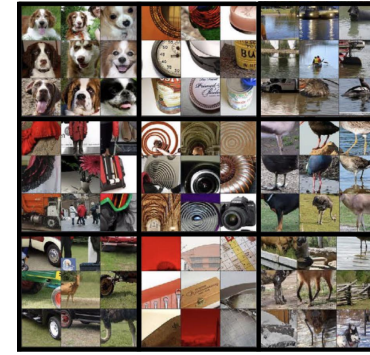
Andrew Ng

Visualizing deep layers

Layer 1   Layer 2   Layer 3   Layer 4   Layer 5

Andrew Ng
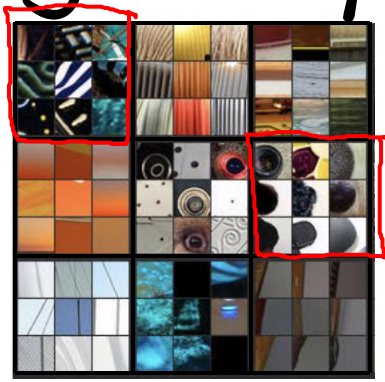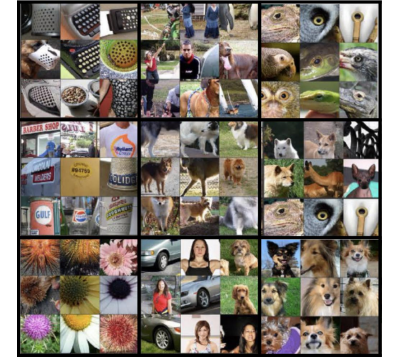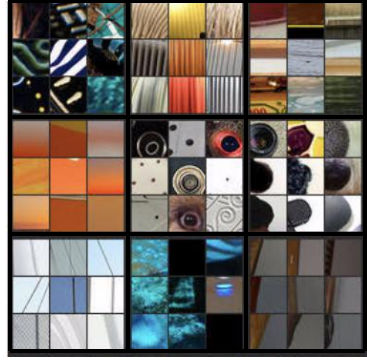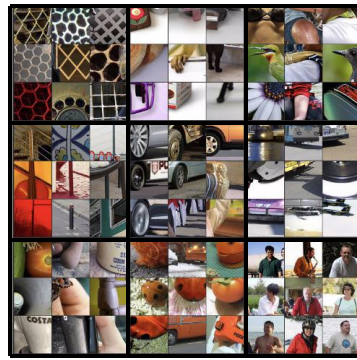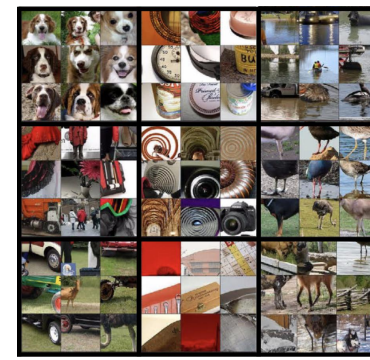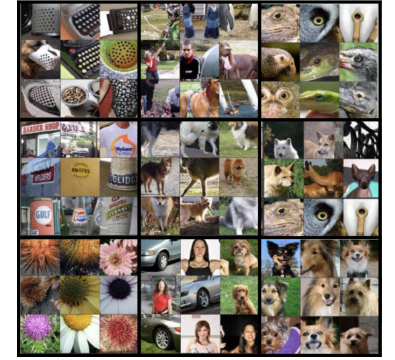
Visualizing deep layers: Layer 1

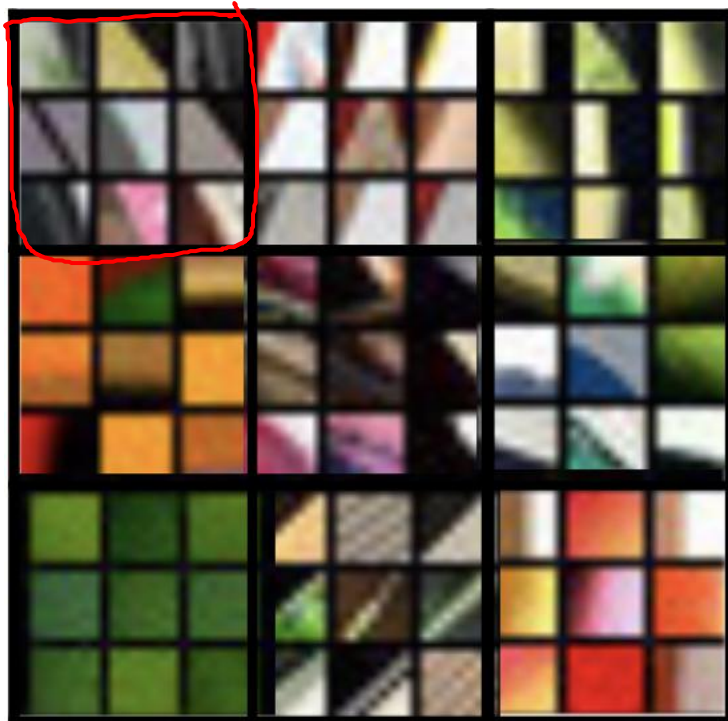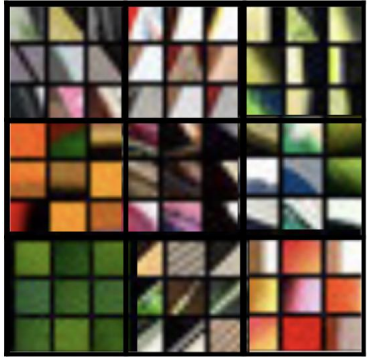Layer 1　　　Layer 2　　　Layer 3　　　Layer 4　　　Layer 5

Andrew Ng
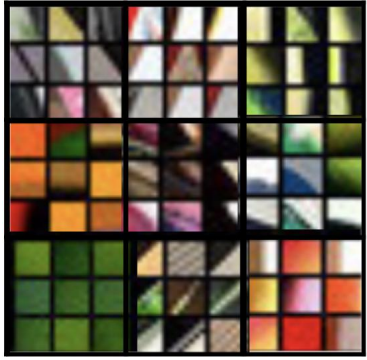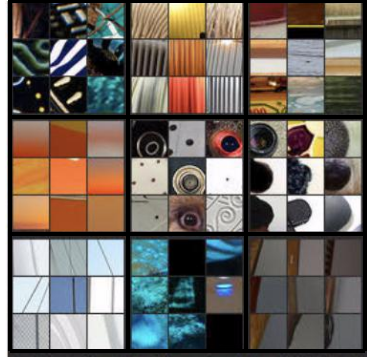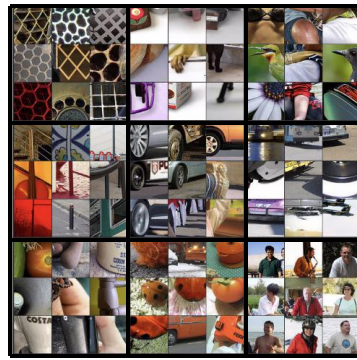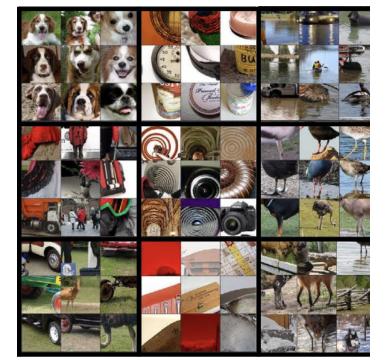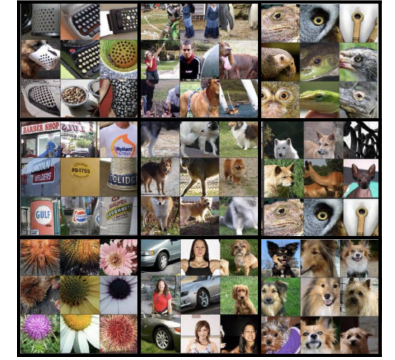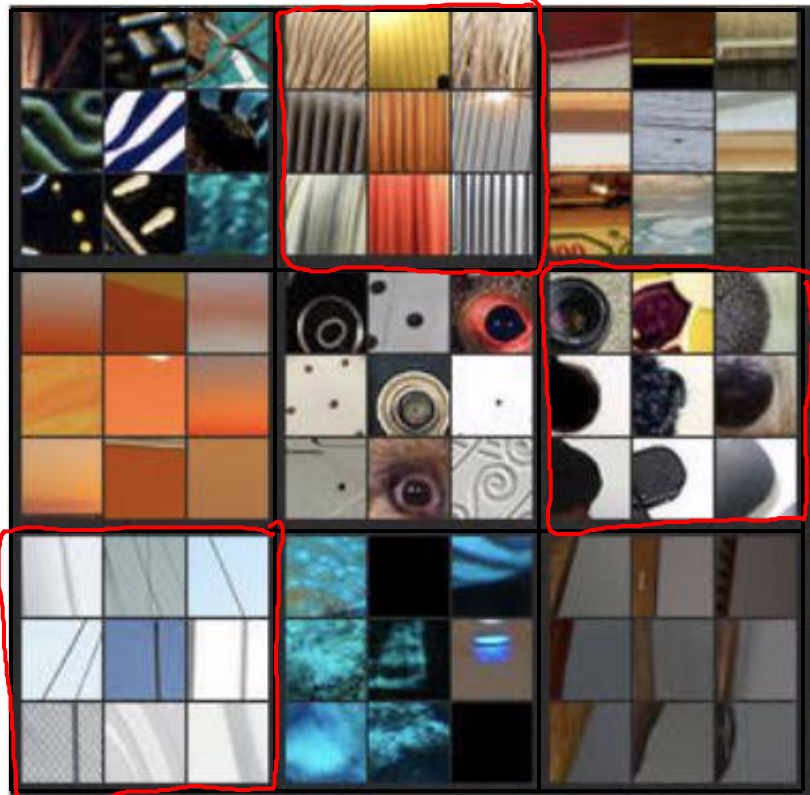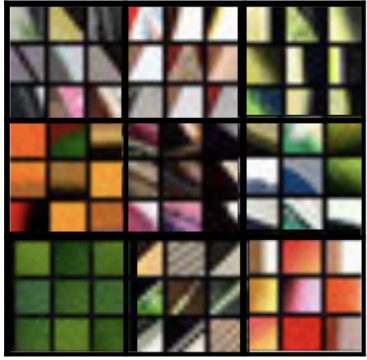
Visualizing deep layers: Layer 2
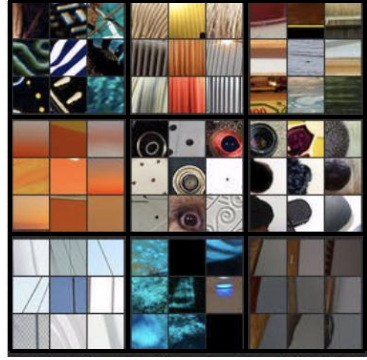

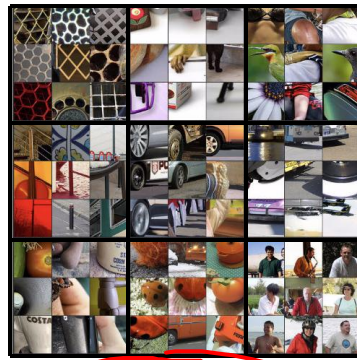Layer 1   Layer 2   Layer 3   Layer 4   Layer 5

Andrew Ng

Visualizing deep layers: Layer 3

Layer 1   Layer 2   Layer 3   Layer 4   Layer 5
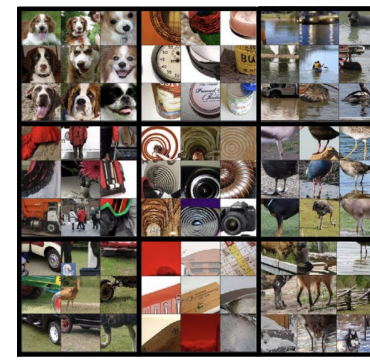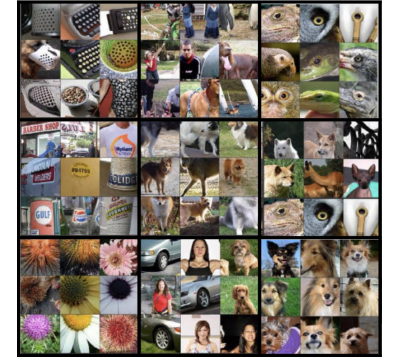
Andrew Ng

Visualizing deep layers: Layer 3

Layer 1

Layer 4

Layer 5

Andrew Ng

Visualizing deep layers: Layer 4
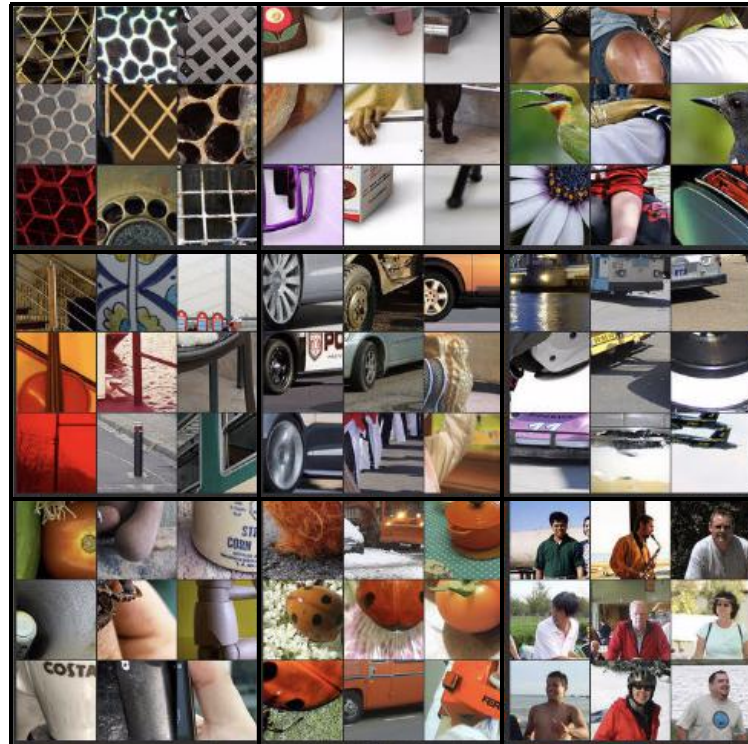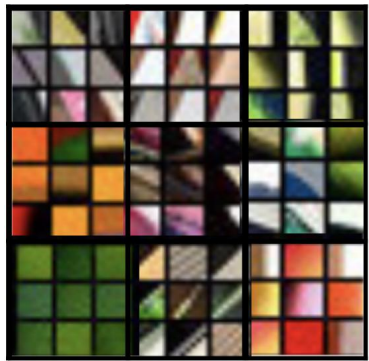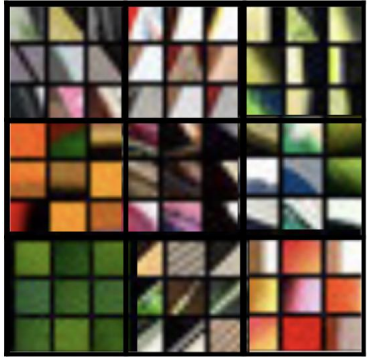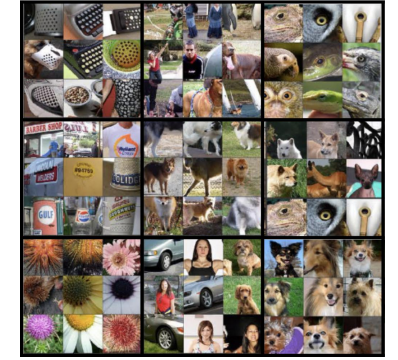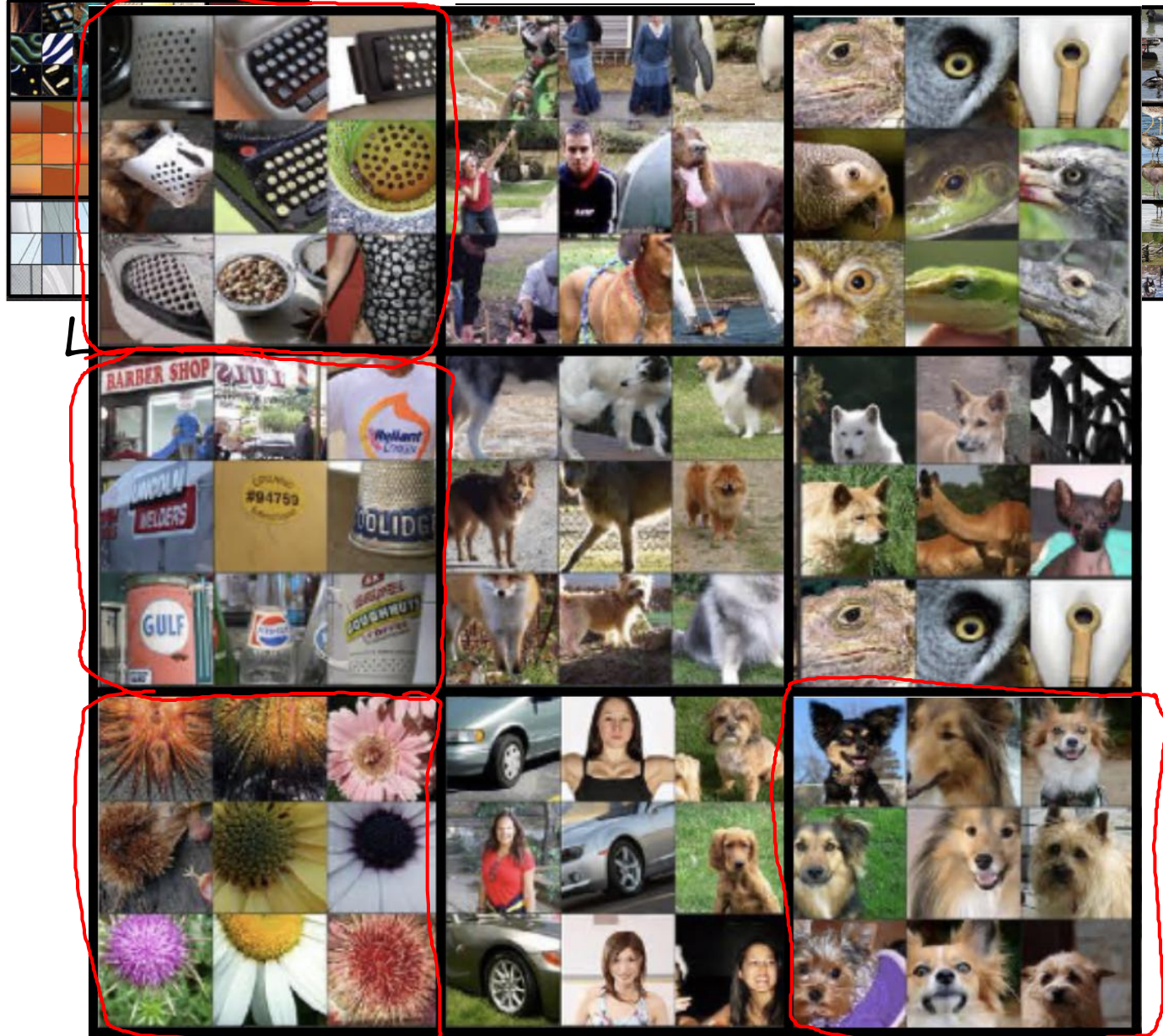

Layer 4

Layer 5

Andrew Ng
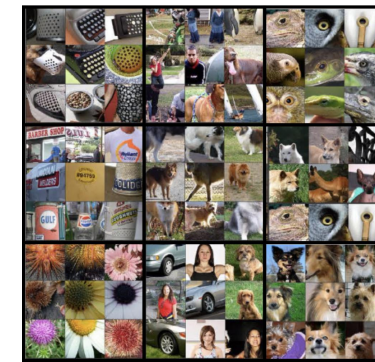
Visualizing deep layers: Layer 5

Layer 1

Layer 5

Andrew Ng