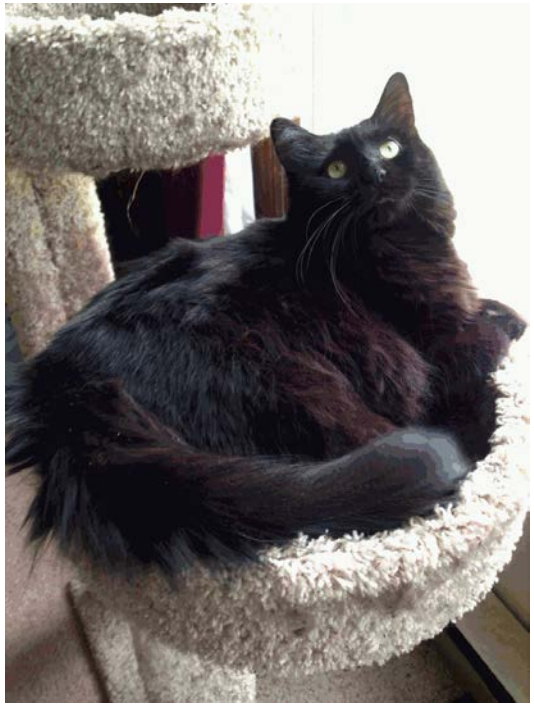
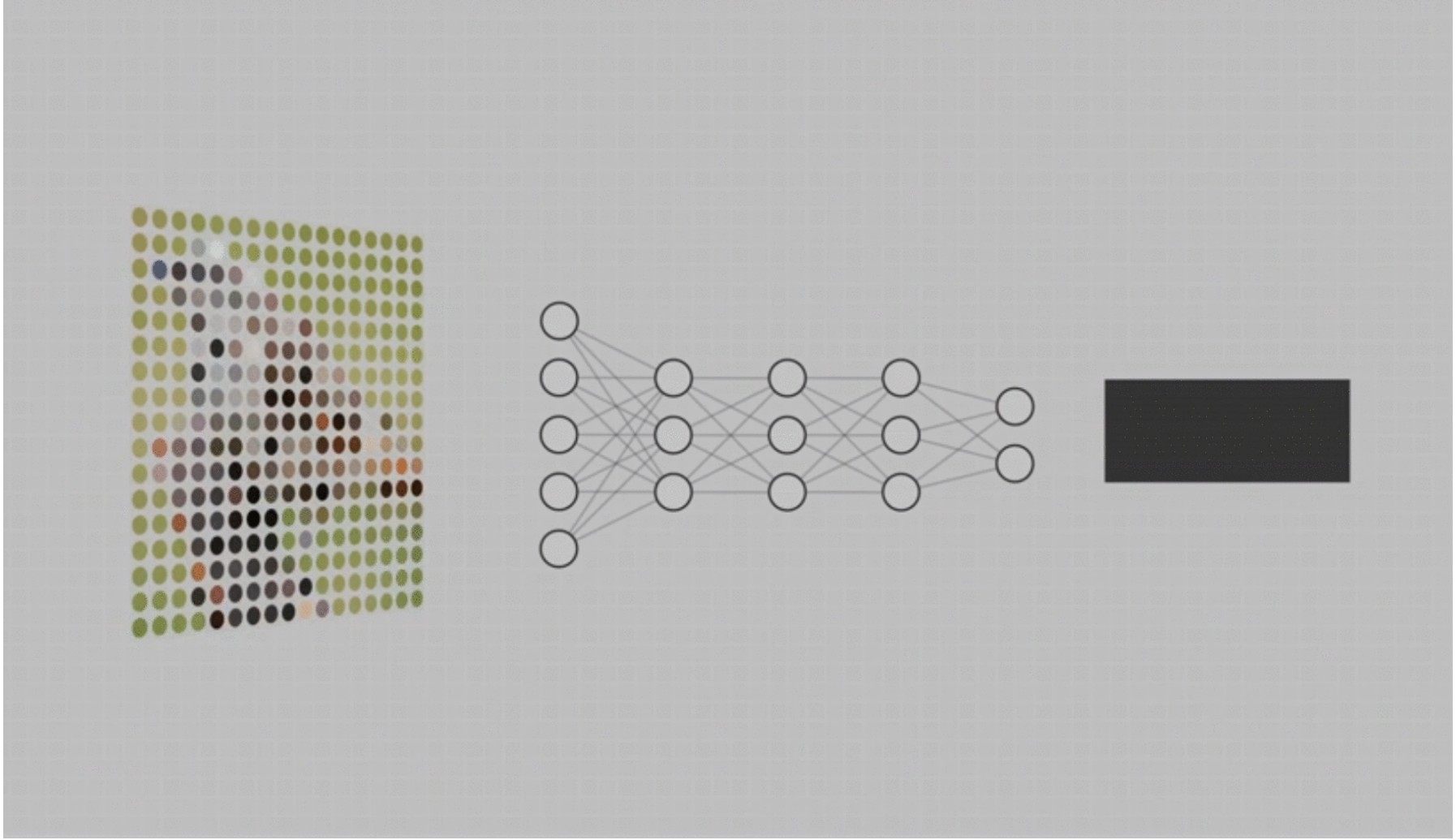


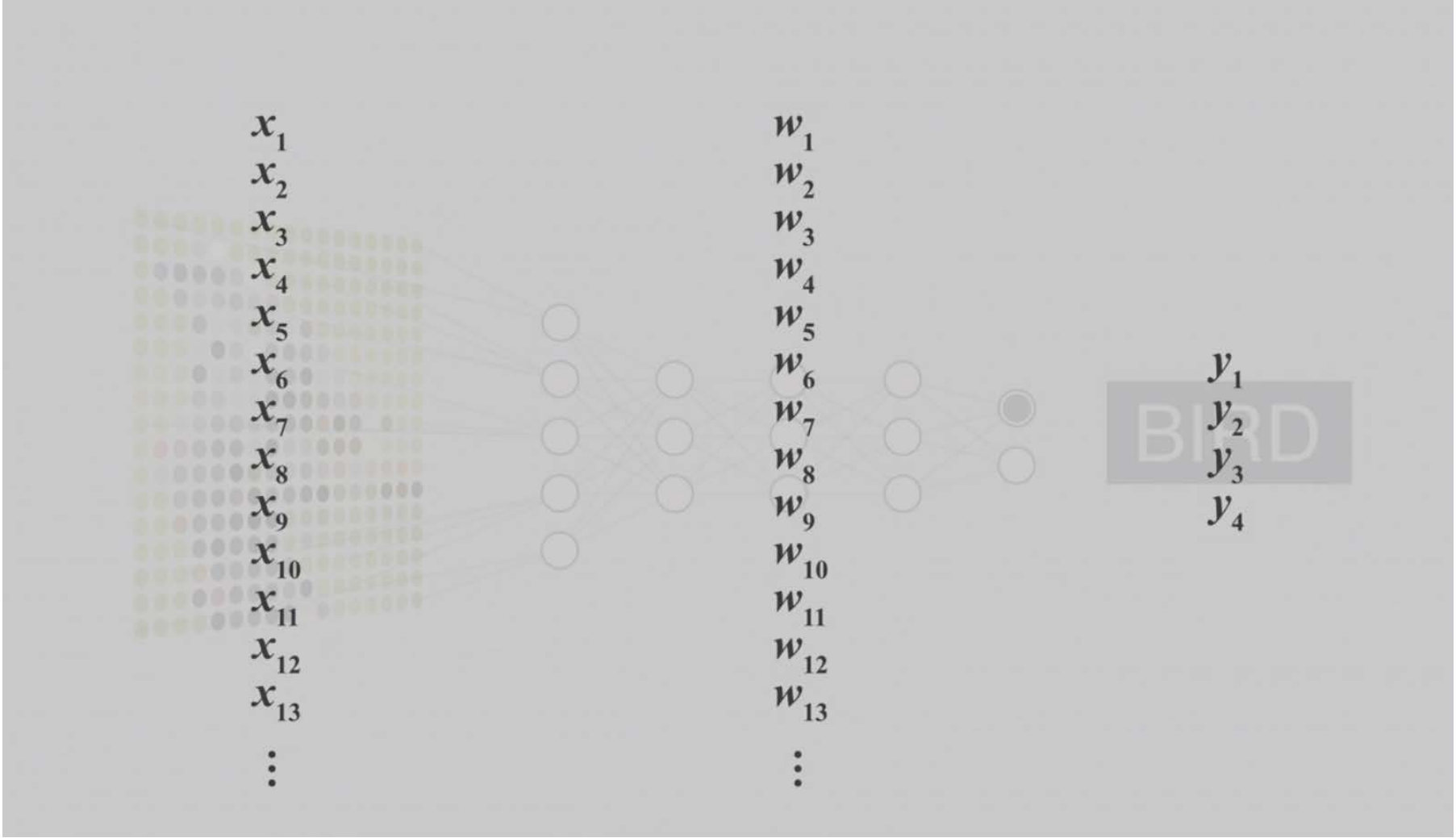
Source: giphy.com

Source: techxplore.com

Convolutional Neural Networks and Art



credits: Blaise Aguera y Arcas



credits: Blaise Aguera y Arcas

$$x \cdot w = y$$

	$x \cdot w = y$
Classification	$2 \cdot 3 = ?$
Training	$2 \cdot ? = 6$
Art	$? \cdot 3 = 6$

Classification $$w' = w + \alpha \frac{\partial L}{\partial w}$$

Art $$x' = x + \alpha \frac{\partial L}{\partial x}$$

$$? \cdot \ w = y$$

$x = ?$

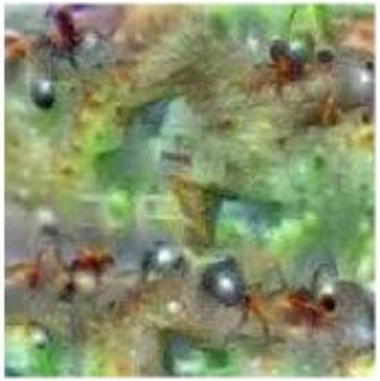
- From scratch
- From an image
- From an image and a style image

$$x = ?$$

From scratch

Hartebeest

Measuring Cup



Ant

Starfish

Anemone Fish

Banana

Parachute

Screw

Credits: Google research blog

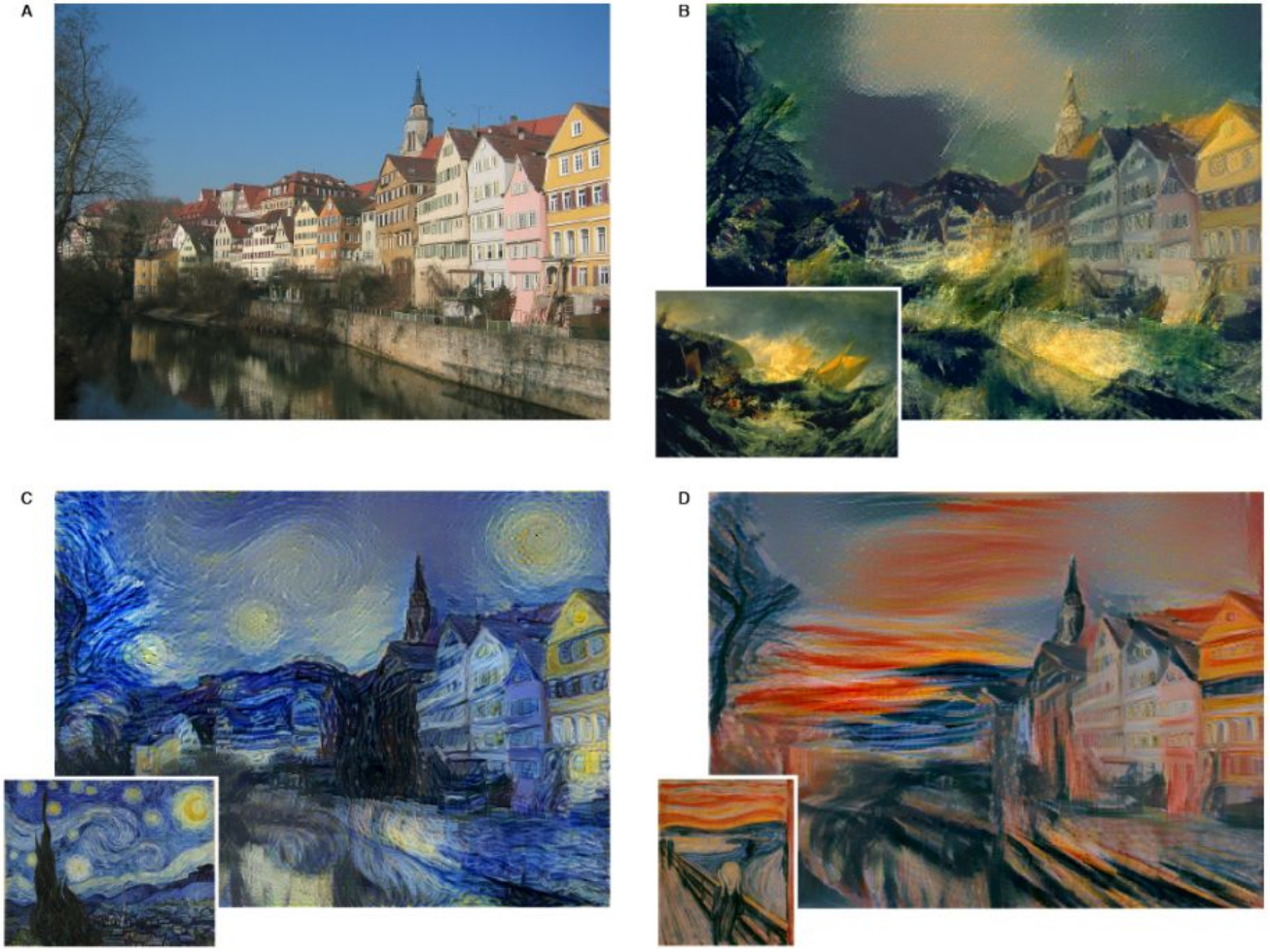
$$x = ?$$

From an image

Source: giphy.com

$$x = ?$$

From an image and a style image



Source: techxplore.com

Further reading

Explore

- yosinski.com/deepvis
- https://arxiv.org/abs/1312.6034
- http://cs231n.stanford.edu/ Lecture 9
- deepart.io
- https://research.googleblog.com/2015/06/inceptionism-going-deeper-into-neural.html

Implementation

- https://github.com/jcjohnson/neural-style
- https://github.com/ghwatson/faststyle
- https://github.com/dsanno/chainer-deepdream
- https://github.com/google/deepdream/blob/master/dream.ipynb