Whining

or

word vector : word analogy :: convnet activations : image analogy

Aaron Schumacher

Hack and Tell DC

2017-09-14

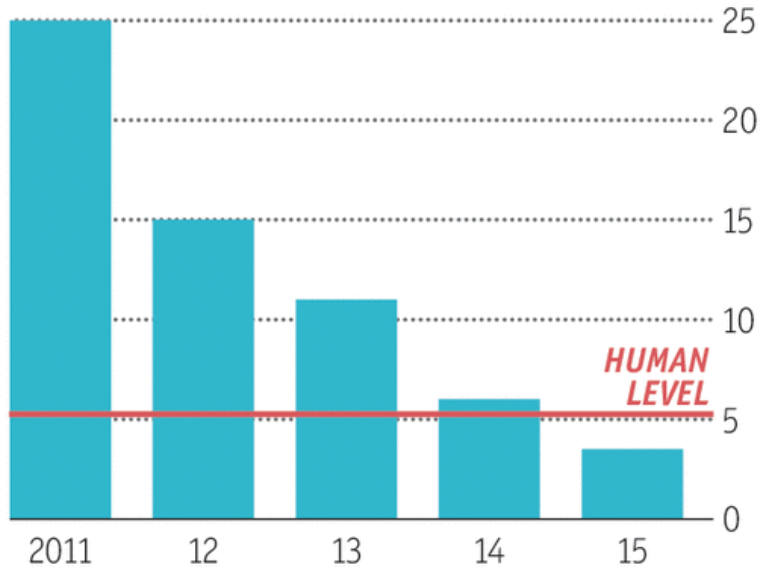
see also: http://planspace.org/20170911-problems_with_imagenet_and_its_solutions/

IMAGENET

IMAGENET

Ever cleverer

Error rates on ImageNet Visual Recognition Challenge, %



Sources: ImageNet; Stanford Vision Lab

Economist.com

croquet ball

croquet ball

tennis ball

unicycle

unicycle

person

goldfish

goldfish

goblet

person

person

dumbbell

water bottle

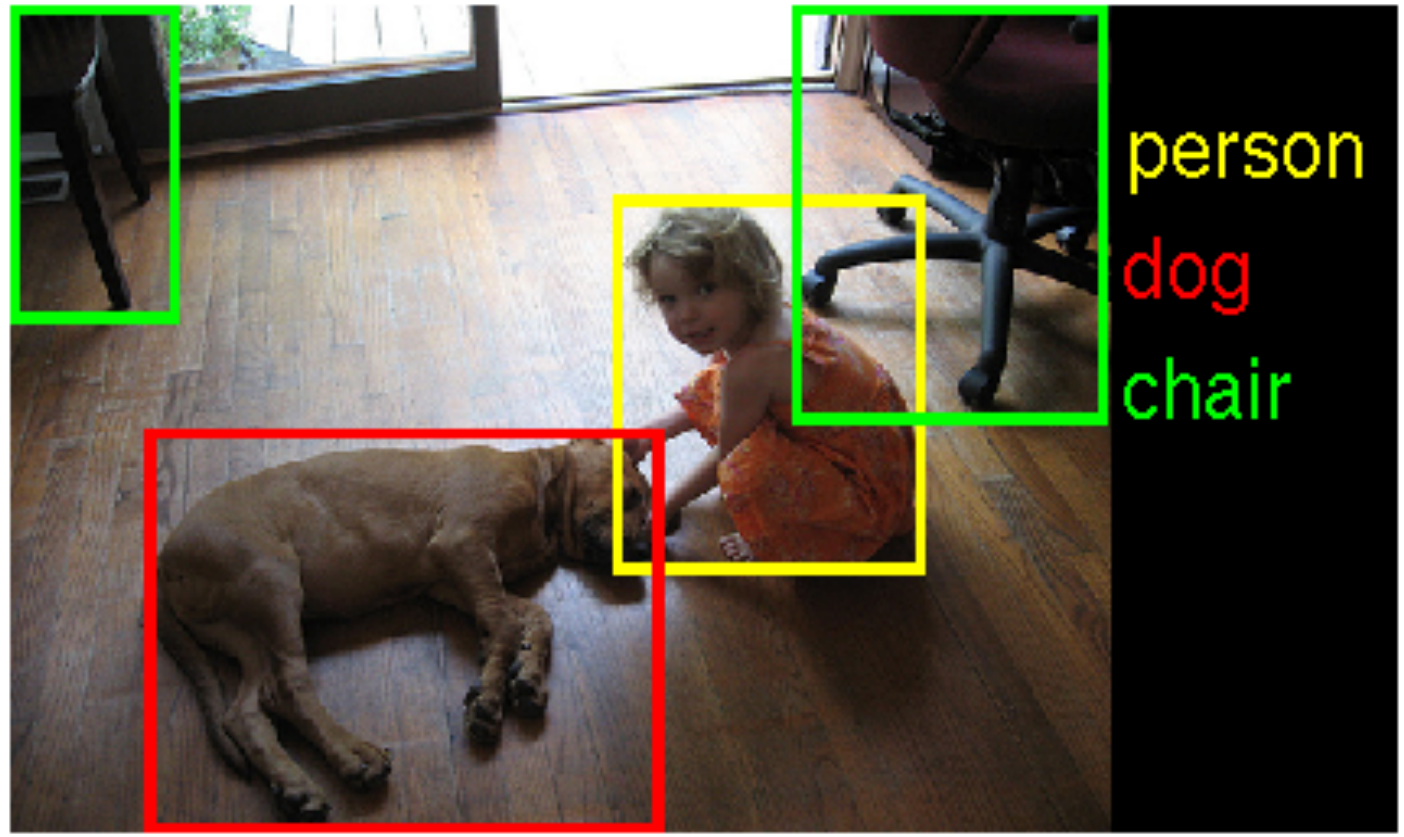
hammer

https://research.googleblog.com/2015/06/inceptionism-going-deeper-into-neural.html

burrito

burrito

guacamole?


person
dog
chair

jellyfish

jellyfish

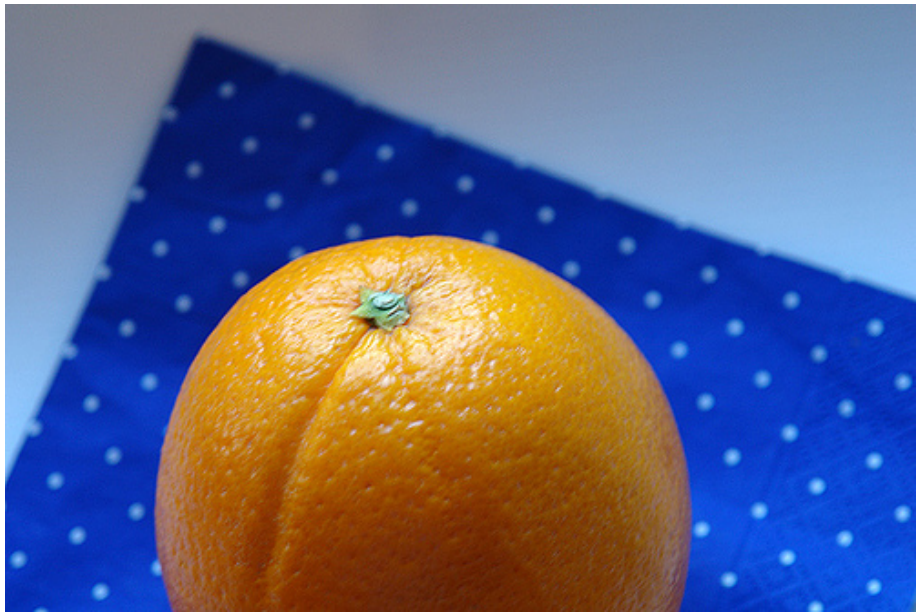
mushroom

king : queen :: man : woman

total fail

cheating!

http://giantis.com



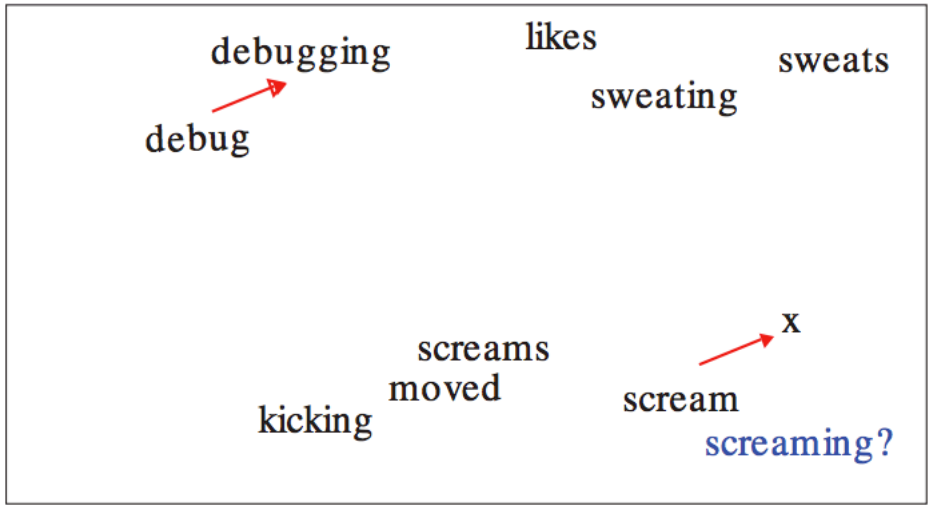


Figure 2: When $a^* - a$ is small and b and b^* are close, the expected answer may be returned even when the offsets are inconsistent (here *screaming* is closest to x).

http://anthology.aclweb.org/W16-2503

a woman riding a horse on a dirt road

an airplane is parked on the tarmac at an airport

a group of people standing on top of a beach

https://arxiv.org/abs/1604.00289

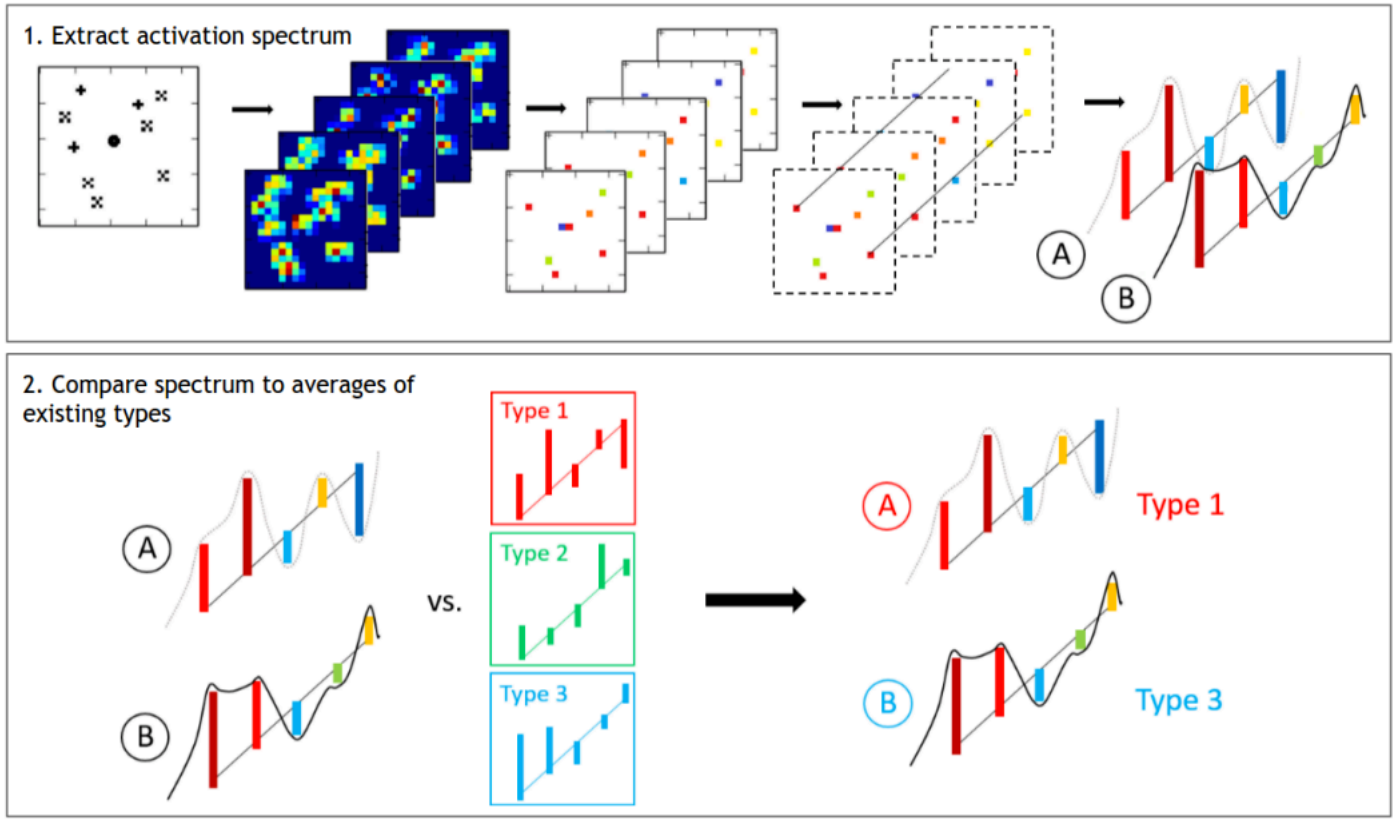


Figure 3: Unsupervised extraction of low-level symbols from the information provided by the convolutional autoencoder. The spectrum of activations across features is obtained by selecting the pixels with the highest activations across features. In a second step each symbol is assigned one of the existing types by comparing their spectra. If no match is found a new type is created.

https://arxiv.org/abs/1609.05518

Thanks!