NLP and Word Embeddings

Using word embeddings

deeplearning.ai

Named entity recognition example

①1   ①1   0   0   0   0

Sally $x^{(1)}$ Johnson $x^{(2)}$ is $x^{(3)}$ an   orange

Robert   Lin   is —   an   apple

→ 1 B words – 100B words

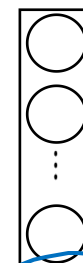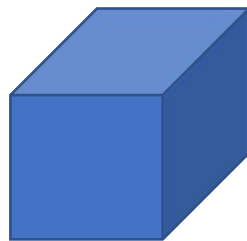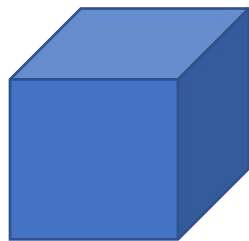→ 100k words ←

a

BRNN

durian   cultivator.

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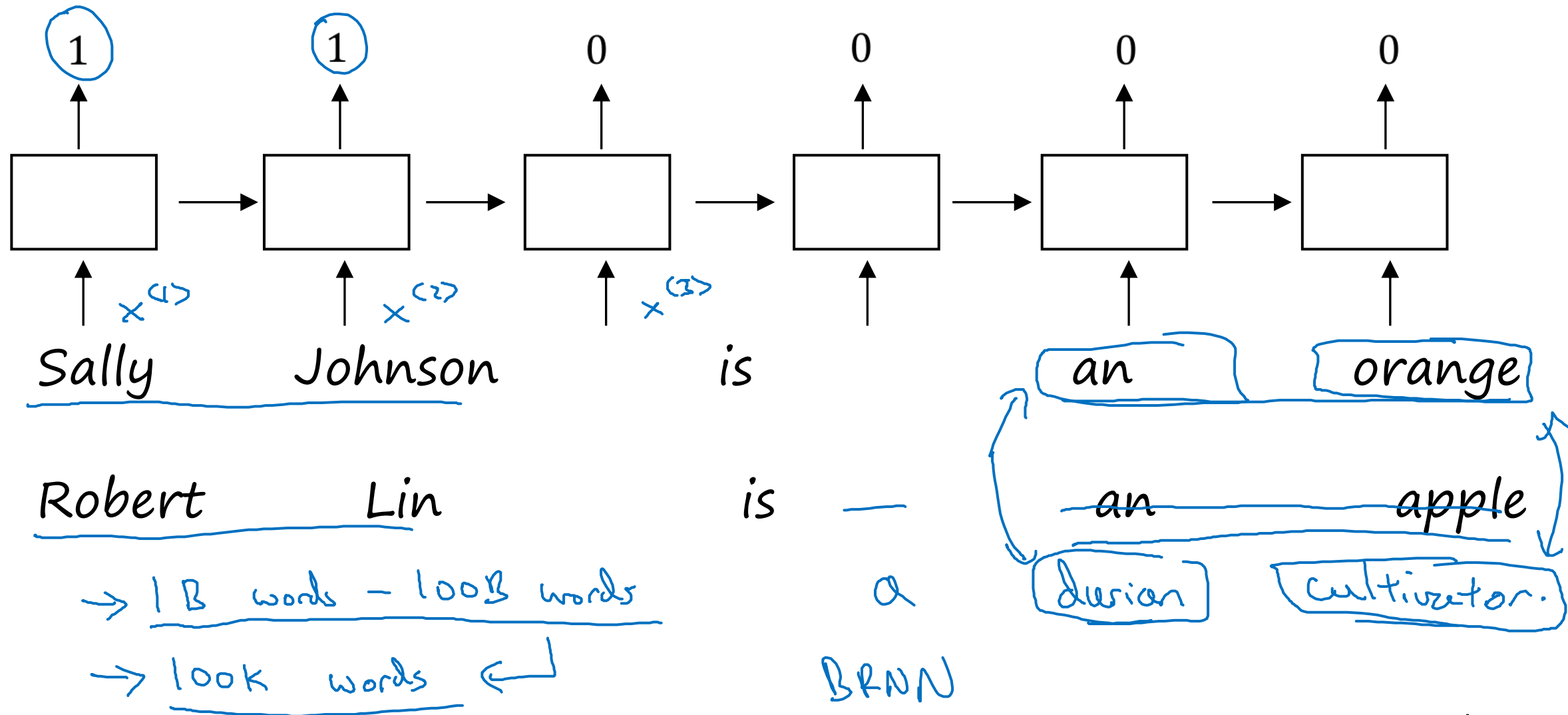
Transfer learning and word embeddings

1. Learn word embeddings from large text corpus. (1-100B w

   (Or download pre-trained embedding online.)

2. Transfer embedding to new task with smaller training set.
   (say, 100k words) $\rightarrow 10,000$ $\rightarrow 300$

3. Optional: Continue to finetune the word embeddings with
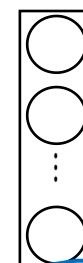   data.

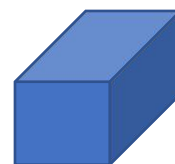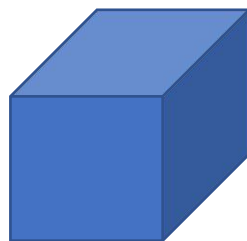# Relation to face encoding (embedding) 128D
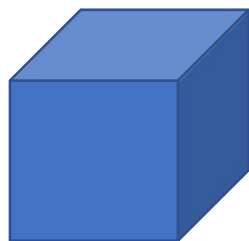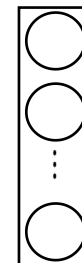

$x^{(i)}$

$f(x^{(i)})$

$x^{(j)}$

$f(x^{(j)})$ 12D

$\hat{y}$

$|v| = 10,000$

$e_1, \ldots, e_{10,000}$

[Taigman et. al., 2014. DeepFace: Closing the gap to human level performance]

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