



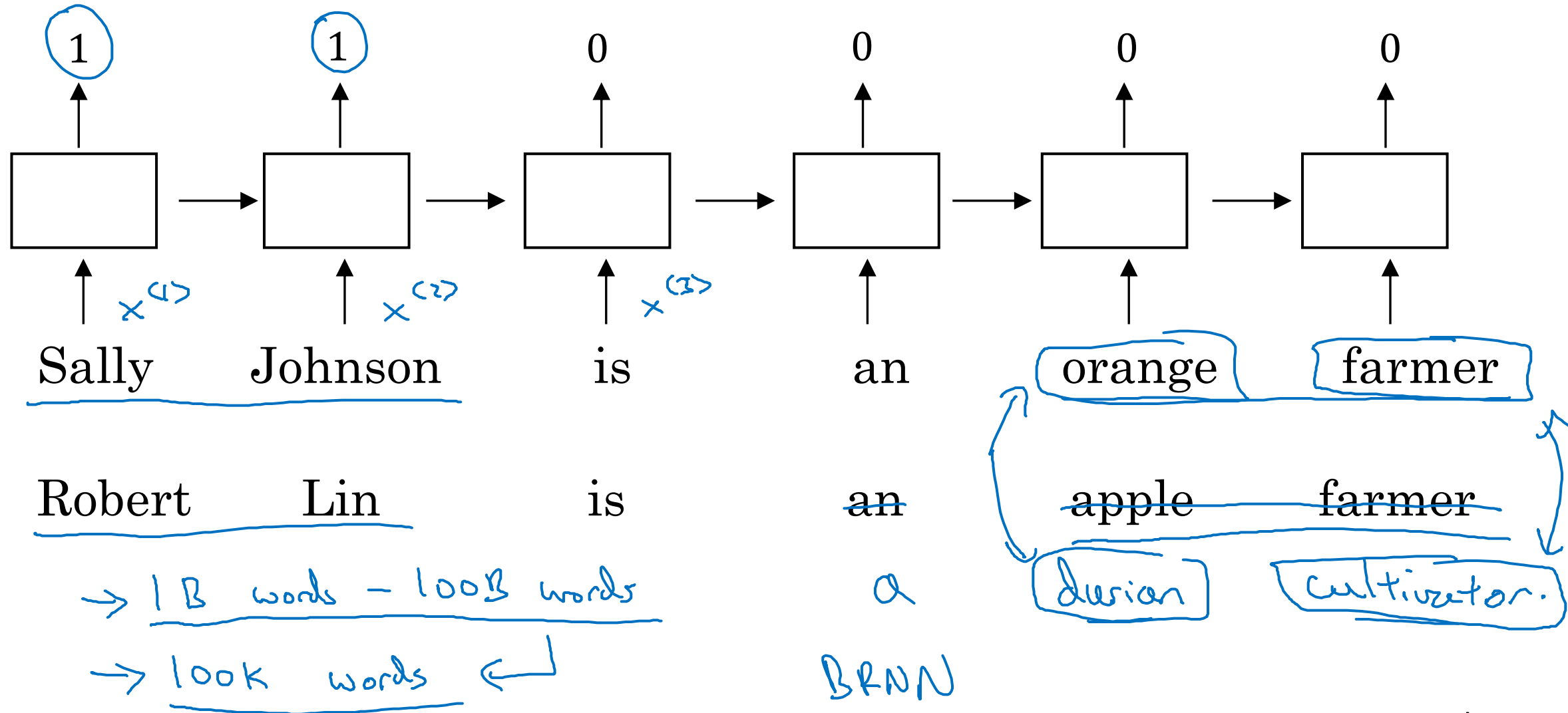
deeplearning.ai

# NLP and Word Embeddings


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## Using word embeddings

# Named entity recognition example



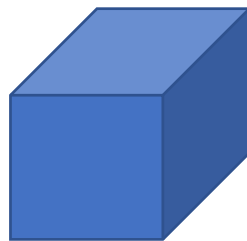
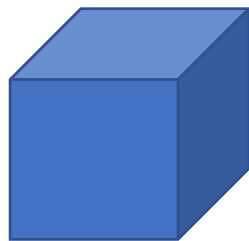
# Transfer learning and word embeddings

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1. Learn word embeddings from large text corpus. (1-100B words)  
(Or download pre-trained embedding online.)
2. Transfer embedding to new task with smaller training set.  
(say, 100k words) → 10,000 → 300
3. Optional: Continue to finetune the word embeddings with new data.

# Relation to face encoding (embedding) 128D



$x^{(i)}$

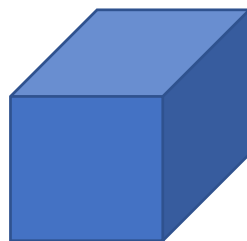
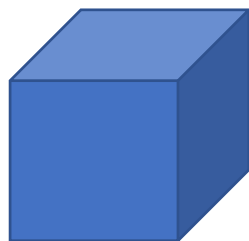


$f(x^{(i)})$

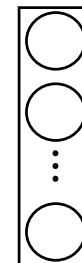
Face Recognition can work on images that haven't seen before.



$x^{(j)}$



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



$\hat{y}$

$|V| = 10,000$

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

Whereas for Word Embedding, you need a fixed list of vocabulary. Anything words that haven't seen is treated as UNK (Unknown).