



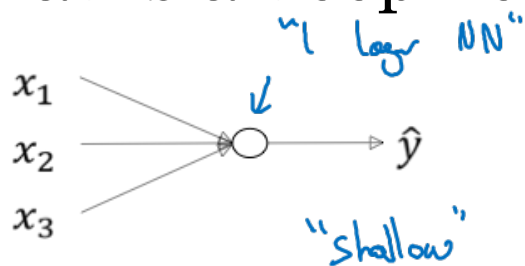
**deeplearning.ai**

# Deep Neural Networks

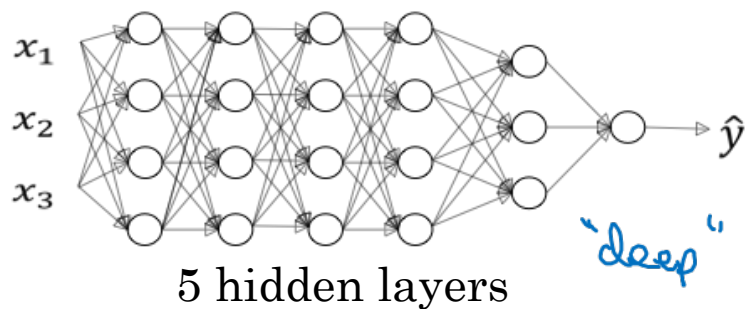
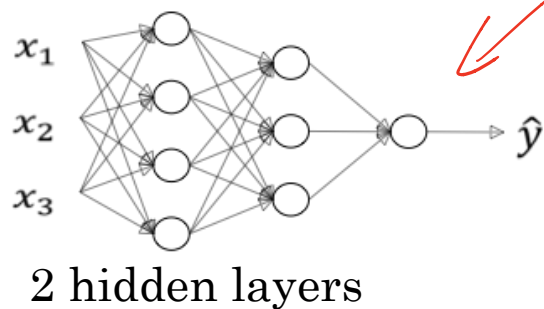
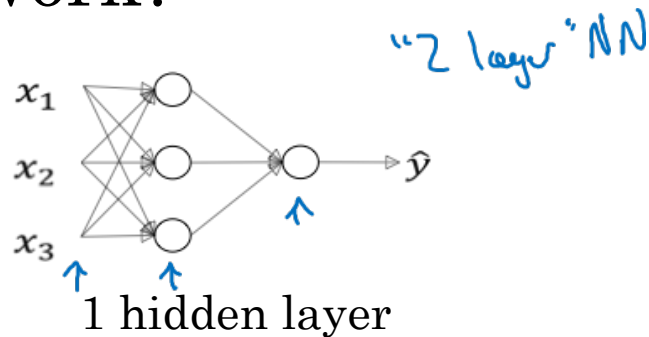
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Deep L-layer  
Neural network

# What is a deep neural network?



logistic regression



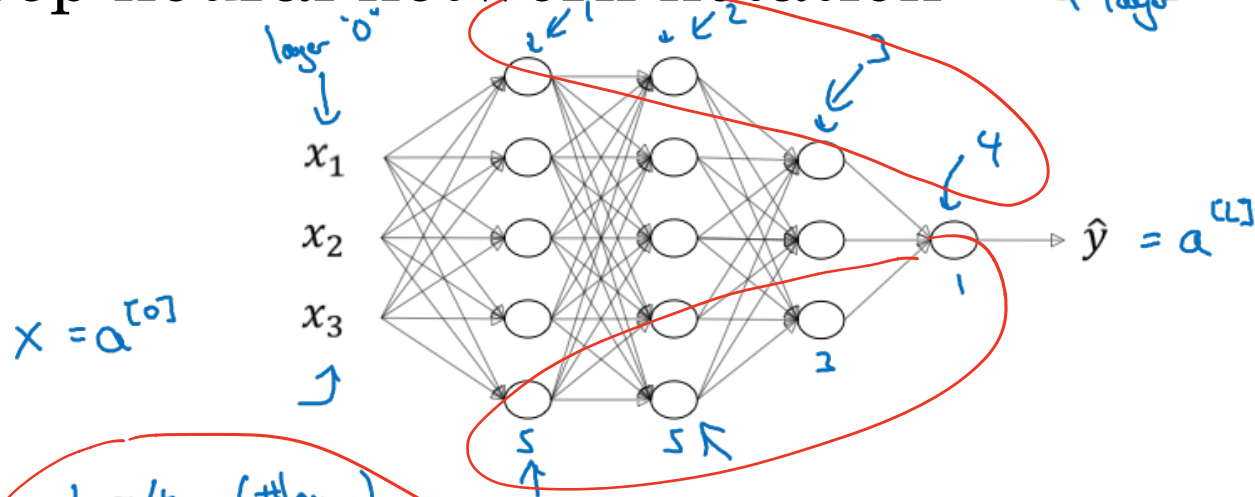
Andrew

有些函数,只有非常深的神经网络能够学习。

将层数数量作为超参数去测试  $\rightarrow 1, 2, \dots$

# Deep neural network notation

4 layer NN



$L = 4$  (#layers)

$n^{[l]} = \# \text{units in layer } l$

$a^{[l]} = \text{activations in layer } l$

$a^{[l]} = g(z^{[l]})$ ,  $w_{\delta^{[l]}}^{[l]} = \text{weights for } \underline{z^{[l]}}$

$n^{[1]} = 5, n^{[2]} = 5, n^{[3]} = 3, n^{[4]} = n^{[L]} = 1$   
 $n^{[0]} = n_x = 3$

computing