



deeplearning.ai

# Deep Neural Networks

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## Parameters vs Hyperparameters

# What are hyperparameters?

Parameters:  $W^{[1]}, b^{[1]}, W^{[2]}, b^{[2]}, W^{[3]}, b^{[3]} \dots$



Hyperparameters:

- learning rate  $\alpha$
- $\frac{1}{\eta}$
- #iterations
- #hidden layers  $L$
- # hidden units  $n^{[1]}, n^{[2]}, \dots$
- choice of activation function

Later: Momentum, mini-batch size, regularizations, ...

# Applied deep learning is a very empirical process

