



Deep Neural Network

- ✓ **Video:** Deep L-layer neural network
5 min
- ✓ **Video:** Forward Propagation in a Deep Network
7 min
- ✓ **Reading:** Clarification about Getting your matrix dimensions right video
1 min
- ✓ **Video:** Getting your matrix dimensions right
11 min
- ✓ **Video:** Why deep representations?
10 min
- ✓ **Video:** Building blocks of deep neural networks
8 min
- ✓ **Reading:** Clarification about Upcoming Forward and Backward Propagation Video
1 min
- ✓ **Video:** Forward and Backward Propagation
10 min
- ✓ **Video:** Parameters vs Hyperparameters
7 min
- 📖 **Reading:** Clarification about What does this have to do with the brain video
1 min
- ▶ **Video:** What does this have to do with the brain?
3 min

Practice Questions

Programming Assignments



Note that the formulas shown in the next video have a few typos. Here is the correct set of formulas.

$$dZ^{[L]} = A^{[L]} - Y$$

$$dW^{[L]} = \frac{1}{m} dZ^{[L]} A^{[L-1]T}$$

$$db^{[L]} = \frac{1}{m} \text{np.sum}(dZ^{[L]}, \text{axis}=1, \text{keepdims}=True)$$

$$dZ^{[L-1]} = W^{[L]T} dZ^{[L]} * g'^{[L-1]}(Z^{[L-1]})$$

Note that * denotes element-wise multiplication)

[Math Processing Error]

$$dZ^{[1]} = W^{[2]} dZ^{[2]} * g'^{[1]}(Z^{[1]})$$

$$dW^{[1]} = \frac{1}{m} dZ^{[1]} A^{[0]T}$$

Note that $A^{[0]T}$ is another way to denote the input features, which is also written as X^T

$$db^{[1]} = \frac{1}{m} \text{np.sum}(dZ^{[1]}, \text{axis}=1, \text{keepdims}=True)$$

Mark as completed

