

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

with the brain video
1 min

- ✓ **Video:** What does this have to do with the brain?
3 min

Practice Questions

- ✓ **Quiz:** Key concepts on Deep Neural Networks
10 questions

Programming Assignments

- ✓ **Notebook:** Building your Deep Neural Network: Step by Step
2h 30m
- ✓ **Programming Assignment:** Building your deep neural network: Step by Step
- ✓ **Notebook:** Deep Neural Network - Application
1h
- ✓ **Programming Assignment:** Deep Neural Network Application

Deep Neural Network - Application

Congratulations! Welcome to the fourth programming exercise of the deep learning specialization. You will now use everything you have learned to build a deep neural network that classifies **cat vs. non-cat images**.



In the second exercise, you used logistic regression to build cat vs. non-cat images and got a 68% accuracy. Your algorithm will now give you an 80% accuracy! By completing this assignment, you will:

- Learn how to use all the helper functions you built in the previous assignment to build a model of any structure you want.
- Experiment with different model architectures and see how each one behaves.
- Recognize that it is always easier to build your helper functions before attempting to build a neural network from scratch.

This assignment prepares you well for the next course which dives deep into the techniques and strategies for parameters tuning and initializations. Take your time to complete this assignment and make sure you get the expected outputs when working through the different exercises. In some code blocks, you will find a "#GRADED FUNCTION: functionName" comment. Please do not modify it. After you are done, submit your work and check your results. You need to score 70% to pass. Good luck ;)!

[Open Notebook](#)