

Logistic Regression as a Neural Network

Python and Vectorization

- ✓ **Video:** Vectorization
8 min
- ✓ **Video:** More Vectorization Examples
6 min
- 📖 **Reading:** Clarification of "dz"
10 min
- ✓ **Video:** Vectorizing Logistic Regression
7 min
- ✓ **Video:** Vectorizing Logistic Regression's Gradient Output
9 min
- ▶ **Video:** Broadcasting in Python
11 min
- ▶ **Video:** A note on python/numpy vectors
6 min
- ▶ **Video:** Quick tour of Jupyter/iPython Notebooks
3 min
- ▶ **Video:** Explanation of logistic regression cost function (optional)
7 min

- ✓ **Quiz:** Neural Network Basics
10 questions

Programming Assignments

- ✓ **Reading:** Deep Learning Honor Code
2 min
- 📖 **Reading:** Programming Assignment FAQ
10 min
- ✓ **Notebook:** Python Basics with numpy (optional)
1h
- ✓ **Practice Programming Assignment:** Python Basics with numpy (optional)
1h
- ✓ **Notebook:** Logistic Regression with a Neural Network mindset
2h
- ✓ **Programming Assignment:** Logistic Regression with a Neural Network mindset

Heroes of Deep Learning (Optional)

Python Basics with numpy (optional)

Welcome to your first (Optional) programming exercise of the deep learning specialization. In this assignment you will:

- Learn how to use numpy.
- Implement some basic core deep learning functions such as the softmax, sigmoid, dsigmoid, etc...
- Learn how to handle data by normalizing inputs and reshaping images.
- Recognize the importance of vectorization.
- Understand how python broadcasting works.

This assignment prepares you well for the upcoming assignment. Take your time to complete it 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](#)

