

Python learning resources

MOOCs

Title	Notes
Design of Computer Programs	Good coverage of how to organise your code better and advanced techniques.

Books

Title	Notes
Python for Data Analysis	Good intro, written by the author of the Pandas library. A little old now – library has developed significantly since the book was published.
Effective Python	Good book for understanding the ‘Pythonic’ way of writing programs - i.e. tips and tricks for how to get the most out of the language.
SICP in Python from Berkley	Composing programs course in Python 3. Based on the textbook Structure and Interpretation of Computer Programs by Harold Abelson and Gerald Jay Sussma. Discussion here . See also this: http://cs61a.org/
Automate the Boring Stuff with Python	Automate the boring stuff is a free resource (very good!). This book along with the Udemy course of the same name is popular amongst digital archivists. From this link you can preview the first 15 of the course’s 50 videos for free on YouTube.
Python Data Science Handbook	Free and is a good introduction to the data science end - NumPy, pandas etc.

Blogs/Other websites

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Software Carpentry	Since 1998, Software Carpentry has been teaching researchers in science, engineering, medicine, and related disciplines the computing skills they need to get more done in less time and with less pain. Programming with Python: https://swcarpentry.github.io/python-novice-inflammation/
Pycon	Videos from the annual Python conference - notable for their very high-quality speakers.
Learn Python the hard way	See discussion here: https://news.ycombinator.com/item?id=13722852 .
Cookiecutter Data Science	A logical, reasonably standardized, but flexible project structure for doing and sharing data science work.
Jupyter Notebook tips and tricks	Includes Python keyboard shortcuts, magic commands, and running code from non-Python kernels inside Notebooks.

w3schools python tutorial	Basic intro to python useful for just getting used to syntax getting the basics right. Aimed at web development and progresses onto this further into this tutorial.
Python Docs	A good general resource.
Learn X in Y minutes (Python3)	Goes through basic Python syntax quite concisely.
Using Jupyter notebooks with a virtual environment	Very useful for helping beginners to understand working in virtual environments.

Other

Title	Notes
Introductory Python training	Introductory Python training sessions by Tom Ewing at DfT. Great if you're doing Python training in your department.
Project Euler	Programming problems (language agnostic) that give you practice in various aspects of programming. The different problems are set up to cover various programming techniques and are (roughly) in increasing level of difficulty.
More intro to Python training	Some more introductory Python training materials by Robin Linacre. Less comprehensive than Tom's.
Community Tutorials	This is a guide to many pandas tutorials by the community, geared mainly for new users.