



# PYTHON LEARNING RESOURCES

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*Theory and Practice*







# THREE MAIN PARTS

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- Python syntax
- Algorithms
- Practice

# LEARNING PYTHON SYNTAX

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- edX.org and MIT Open Courseware, “**Introduction to Computer Science and Programming Using Python**” by MIT
  - <https://www.edx.org/course/introduction-computer-science-mitx-6-00-1x-10>
  - <https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-0001-introduction-to-computer-science-and-programming-in-python-fall-2016/>
- **Official documentation:** <https://docs.python.org>
- **Free books:** <http://pythonbooks.revolunet.com/>
- **Code visualizer:** <http://www.pythontutor.com/>
- **30 Days of Code** on [HackerRank.com](https://www.hackerrank.com/challenges/30-days-of-code)



# LEARNING ALGORITHMS AND PROBLEM SOLVING

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- [coursera.org](https://coursera.org): **Algorithms Specialization by Stanford** (in pseudocode; you can audit the courses for free!)
- Free book: **Dasgupta, Papadimitriou, and Vazirani, Algorithms** (in pseudocode)
- **Practice & competitions**: TopCoder, HackerRank, CodeForces
- Also: B. Miller & D. Ranum, Problem Solving with Algorithms and Data Structures using Python on <http://pythonbooks.revolunet.com/>

# PRACTICE

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- Paid internships:
  - **Outreachy** for women
  - **Google Summer of Code** for students
- **Open source 🙌 - you are welcome!**
  - Cadasta, Ceph, Debian, Fedora, GNOME, Mozilla, OpenStack, oVirt, QEMU, Wikimedia, ...
  - Start by:
    - reading developer documentation
    - joining the organization's communication channels
    - solving “good-first-bugs” on bug tracker/GitHub issues





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