More

What have we learned?

- Jupyter notebooks
- Numbers (int, float)
- Booleans
- Strings
- Conditionals (if, elif, else)
- Lists, tuples, sets
- Loops (for, while)
- Dictionaries
- Functions
- Variable scope and assignment
- Nonde and is
- Modules: math, numpy...
- OOP and inheritance
- Exceptions
- Files
- DBs
- APIs
- Python files and pip

Practice, practice, and practice

- https://www.leetcode.com/
- https://www.hackerrank.com/
- https://projecteuler.net/
- Personal projects.
- Learn by exploring open source repositories.

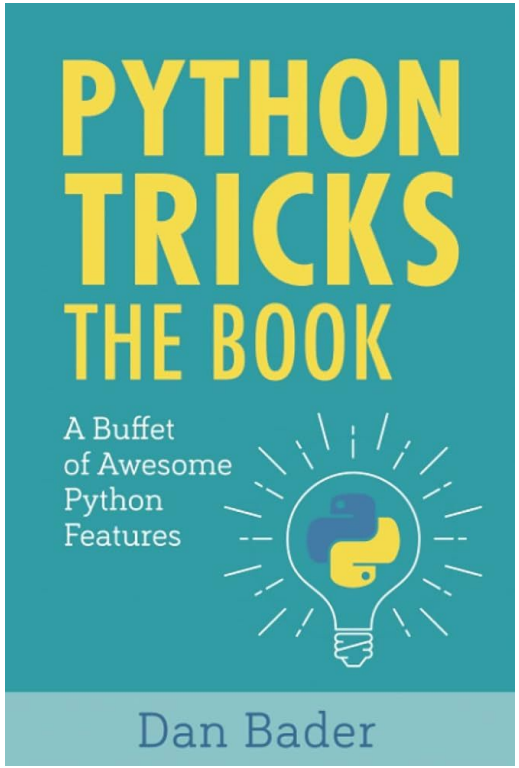
Some more Python

- Generators
- Decorators
- More OOP concepts
  - Public/Protected/Private, Static, Immutable, Metaclasses, Property, etc.
- Asynchronous programming
  - Async, Await, Coroutines, etc.
- Packaging of py code

Python cheatsheets

- https://quickref.me/python.html
- https://www.pythoncheatsheet.org/cheatsheet/built-in-functions

Some more Python



Star

- Data structures
  - Array, queue, stack, linked list, tree, graph...
- Complexity analysis
  - Big O notation
- Algorithms
  - Merge sort, quicksort, Dijkstra, BFS, DFS...
- Pattern design
  - Factory, adapter, decorator, DDD, MVC...

Star

- Proficient in at least one programming language.
- Familiarity with other programming languages.
- Familiarity with multiple paradigms.
  - OO, functional...
- Experience with version control.
  - Git
- Familiarity with different DBs.
  - Relational (SQL), MongoDB, Redis...

Star

- Agile methodologies.
- Code review practices.
- Testing.
  - Unit tests, functional tests...
- Continuous Integration and Continuous Deployment (CI/CD).

Star

- Architecture.
  - CPU, GPU, main memory...
- Operating system concepts.
  - Processes, threads, memory management...
- Networking.
  - TCP/IP, HTTP...
- Understanding distributed systems.
- Security.

Star: Specializations

- Web
  - Frontend (React/Vue/Angular).
  - Backend (Node.js, Django, Symfony).
- Mobile
  - iOS (Swift, Objective-C).
  - Android (Kotlin, Java).
- AI/ML
  - Maths and Statistics.
  - Algorithms and methodologies.
  - Sklearn and Tensorflow/Pytorch.

Star: Skills

- Adaptability and lifelong learning.
- Problem-solving.
- Critical thinking.
- Strong communication skills (both written and oral).
- Team collaboration.
- Time management and organization.
- Ability to explain complex concepts in simple terms.
- English.