

Resources related to Beyond Moore's Law presentation

Feel free to let me know of other resources you think should be added. These are mostly Python focused given my background and interests, but happy to add others.

- *The Art of Computer Programming (vol 1-3)*, Knuth
Do not buy these books! They are extremely detailed and expensive, and even a CS undergrad will probably not get through them entirely. However, you should have a look at the tables of contents on Amazon or another site, as it's a fantastic outline for the things you should know. You can then seek out inexpensive online resources or other books to practice them in Python.
- *Introduction to Algorithms*, Cormen, Leiserson, Rivest, Stein
Amazon recommends this for acing their tech interviews. It's also a bit expensive but available used. A lot more compact and possible to go through than Knuth. May or may still not be worth the cost, but again the contents will be useful in setting up a plan of study.
- *Design Patterns: Elements of Reusable Object-Oriented Software*, Gamma, Helm, Johnson, Vlissides (aka, the Gang of Four or GOF)
Again, probably not one to buy, though it's more approachable than Knuth. The biggest issue for many of us is that it hasn't ever been revised and the late-90s version of C++ is confusing even to many C++ programmers. But again, look through the table of contents and seek other resources that cover these topics.
- *Design Patterns Explained: A New Perspective on Object Oriented Design*, Shalloway and Trott.
A more modern treatment of the above that is far more approachable.
- *Clean Code*, Martin
- *Clean Architecture*, Martin
- *The Software Craftsman*, Mancuso
- "Think" series by Allen Downey (O'Reilly)
Particularly *Think Python*, *Think Complexity*, *Think Stats*, *Think Bayes* and maybe *Think DSP*. He also covers Java and Perl with co-authors and those would be useful if you want to explore one of those languages. I love the fact that these books do really try to encourage you to think in terms of the underlying concepts, while also covering a lot about good programming.
- ProjectEuler.net
- Careercup.com
- <http://www.dev.to> and @thepracticaldev