A Computer Science Reading List

by Ultan

The textbooks below are useful either as background reading or, in some cases, as a course textbook.

Junior Fresh

- Mathematics: Mathematics as a Language by Sara M. McMurry
- Introduction to Programming: Introduction to Programming Using Java by David J. Eck
- Introduction to Computing I/II: ARM Assembly Language - Fundamentals and Techniques by William Hohl and Christopher Hinds
- Digital Logic Design: Digital Design - With an Introduction to the Verilog HDL by Morris R. Mano and Michael D. Ciletti
- Electronics: Foundations of Electronics - Circuits and Devices by Russell L. Meade
- Computers & Society: Computing - A Concise History by Paul E. Ceruzzi, The Victorian Internet by Tom Standage
- Telecommunications: Data Communications and Networking by Behrouz A. Forouzan
- Programming Project: The Mythical Man Month by Frederick P. Brooks

Senior Fresh

- Algorithms and Data Structures: Algorithms by Robert Sedgewick and Kevin Wayne, Grokking Algorithms by Aditya Bhargava
- Systems Programming: Beej's Guide to C Programming by Brian Hall
- Telecommunications II: Data Communications and Networking by Behrouz A. Forouzan
- Information Management I: No textbook used
- Discrete Mathematics: No textbook used
- Concurrent Systems and Operating Systems: Operating Systems - Three Easy Pieces by Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau, The Spin Model Checker by Gerard J. Holzmann, Introduction to Operating System Design and Implementation by Michael Kifer and Scott Smolka
- Microprocessor Systems: ARM Assembly Language - Fundamentals and Techniques by William Hohl and Christopher Hinds
- Computer Architecture I: Logic and Computer Design Fundamentals by M. Morris Mano and Charles Kime
- Programming Project II: Code Complete by Steve McConnell

Junior Sophister

- Symbolic Programming: Learn Prolog Now by Patrick Blackburn, Johan Bos and Kristina Striegnitz

- Software Engineering: No textbook used

- Computer Architecture II: No textbook used

- Compiler Design I: No textbook used

- Introduction to Functional Programming: Haskell Programming from First Principles by Christopher Allen and Julie Moronuki, Learn You a Haskell for Great Good by Miran Lipovaca

- Information Management II: No textbook used

- Computational Mathematics: Applied Numerical Methods with Software by Shoichiro Nakamura, Numerical Methods for Engineers and Scientists by Amos Gilat and Vish Subramaniam

- Software Engineering Group Project: Dreaming in Code by Scott Rosenberg

- Concurrent Systems I: No textbook used

- Statistical Methods for Computer Science: Probability for the Enthusiastic Beginner by David J. Morin

- Advanced Telecommunications: Data Communications and Networking by Behrouz A. Forouzan, Understanding Cryptography by Christof Paar and Jan Pelzl

- Artificial Intelligence: Artificial Intelligence - Foundations of Computational Agents by David L. Poole and Alan K. Mackworth

Senior Sophister

- Internet Applications: No textbook used

- Fuzzy Logic and Control Systems: No textbook used

- Formal Verification: Logic in Computer Science - Modelling and Reasoning About Systems by Michael Huth and Mark Ryan

- Human Factors: Interaction Design by Helen Sharp, Yvonne Rogers and Jennifer Preece

- Computer Vision: A Practical Introduction to Computer Vision With OpenCV by Kenneth Dawson-Howe

- Entrepreneurship: Entrepreneurship - Successfully Launching New Ventures by Bruce R. Barringer and R. Duane Ireland