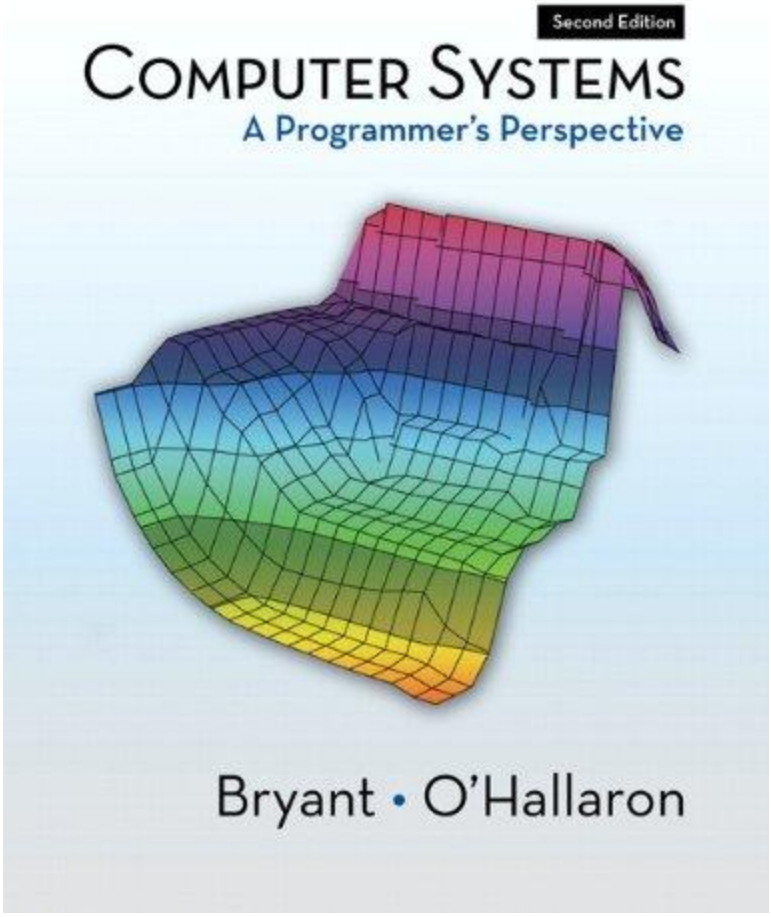
Computer Systems: A Programmers Perspective (2nd Edition) by David R. OHallaron



Good Textbook

Bryant and OHalloran explain the important and enduring concepts underlying all computer systems, and show the concrete ways that these ideas affect the correctness, performance, and utility of application programs. The books concrete and hands-on approach will help readers understand what is going on “under the hood” of a computer system.

This book focuses on the key concepts of basic network programming, program structure and execution, running programs on a system, and interaction and communication between programs.

For anyone interested in computer organization and architecture as well as computer systems.

Personal Review: Computer Systems: A Programmers Perspective (2nd Edition) by David R. OHallaron

This book is a very unusual one because it explains computer architecture from the standpoint of the C/C++ programmer. That is, its object is to allow the programmer to understand how the architecture of the computer on which he/she programs effects the performance and execution of these programs. Things such as virtual memory, parallelization, optimization, and even logical and mathematical operations are effected by the architecture of the computer itself. For example - big endian versus little endian machines. You'd believe you wouldn't have to think about how your computer is organized at this level - that is one of the reasons you program in a high level language anyways, right? Wrong. If you have data stored in big endian format that is mathematically operated upon in a little endian machine, or vice versa, you will wind up with something quite different from what you intended. That's the kind of information this book gets into.

Some have labeled this book as "hard". It really is not hard as much as it is densely packed with knowledge. You need to take each concept within each chapter and think about it before you go on to the next. If you do this you'll not only get much out of it during your initial read, you'll have a valuable reference for some time to come.

To get the most of this book you should already be a capable C/C++ programmer and you should also know the building blocks of a computer. The book goes over these things very quickly but it really is not enough if you start out knowing nothing about these subjects. Highly recommended.

The following is the proposed table of contents for the second edition: