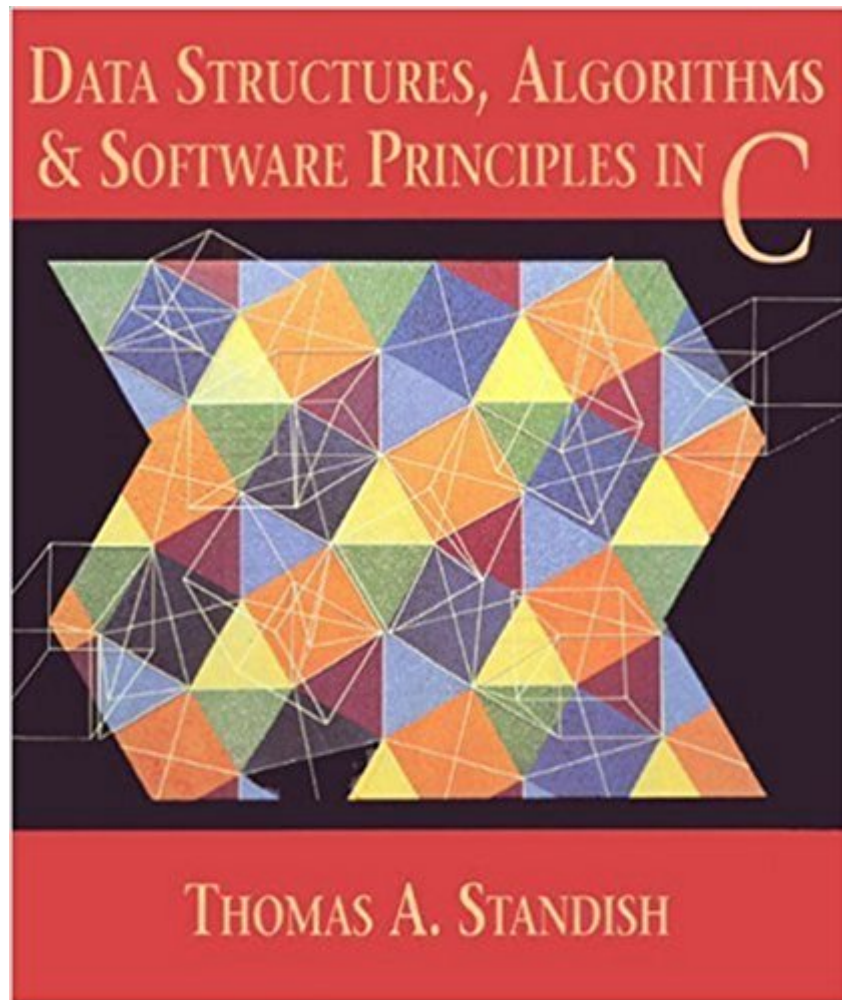




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Data Structures, Algorithms, And Software Principles In C



Synopsis

Using C, this book develops the concepts and theory of data structures and algorithm analysis step by step, proceeding from concrete examples to abstract principles. The material is unified by the use of recurring themes such as efficiency, recursion, representation and trade-offs. Important software engineering concepts are also covered, including modularity, abstract data types and information hiding, as well as new developments such as risk-based software, life cycle models and object-oriented programming.

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Customer Reviews

Using C, this book develops the concepts and theory of data structures and algorithm analysis step-by-step. It gradually proceeds from concrete examples to abstract principles. The presentation stresses motivation, intuition, and utility before giving technical details. Recurring themes, such as recursion, levels of abstraction, efficiency, representation, and trade-offs, unify the material completely. Important traditional and contemporary software engineering principles are also covered, including modularity, abstract data types and information hiding, as well as new developments, such as risk-based software life cycle models and object-oriented programming.

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Thomas A. Standish is the chairman of computer science at the University of California, Irvine. In 1990-91, he became the fourth winner of University of California Irvine's Distinguished Faculty

Lectureship for Teaching, the campus' highest distinction for teaching excellence. He has also been a co-winner of his department's best-teacher award, chosen by the popular vote of University of California Irvine undergraduate computer science students. 0201591189AB04062001

Good book for learning a bit more about C and algorithms and such. It was advertised as "new, never opened" which was not true as it had pages that were bent as bookmarks and had some wear on the edge and back, but this issue was identified and resolved by the seller. Only reason I'm not giving it 5 stars is because the contents of the book itself are a bit difficult to directly apply to projects and such compared to many other such books.

Textbook came in great quality, even the detachable formula sheets were still in it intact. Thank you very useful

I used this textbook for my Data Structures class in college, and found it to be great. I'm definately keeping it! Standish makes extensive use of diagrams to aid in explaining topics that can be confusing at first. Many topics are touched on briefly with references pointing the curious reader to more in-depth treatments. This book does something that is very important for programmers: it teaches good programming practice! I know many programmers who can program but do not grasp the important design principles that Standish stresses (like abstracting the implementation of a data type from its interface, and documenting well for decreased maintenance cost). Standish teaches the advantages and disadvantages of the top-down and bottom-up programming methods. I think this book is excellent for data structures, and a good *introduction* to analysis of algorithms. After just taking an analysis of algorithms class, this book's superficiality in that area becomes apparent. If you are looking for in-depth coverage of algorithms this is not the book for you. Darrell Bishop

I have used this book in my data structures class. It has some good points. It covers each and every data structure in depth and discusses multiple implementations of each of them. It also makes liberal use of diagrams showing what the data structure is supposed to be doing in memory at that time. The problem with it is that it deals with everything very theoretically, often times letting the user puzzle out the implementations themselves. It is overly wordy, the explanations could be cut in half and made much more to the point without losing anything. I don't know about anyone else but I like to be taught how to do something and then play with it for understanding. I don't like to have the

entire theory of what is supposed to happen explained to me in the abstract and then being left to get it or not. Although there are people who learn best this way. If you are one of them then by all means pick up this book. My over all feeling is that it makes you work overly hard to acquire the knowledge that it presents.

Contents

Chapter 1 - Preparing for the Journey

Chapter 2 - Linked Data Representations

Chapter 3 - Introduction to Recursion

Chapter 4 - Modularity and Data Abstraction

Chapter 5 - Introduction to Software Engineering Concepts

Chapter 6 - Introduction to Analysis of Algorithms

Chapter 7 - Linear Data Structures - Stacks and Queues

Chapter 8 - Lists, Strings, and Dynamic Memory Allocation

Chapter 9 - Trees

Chapter 10 - Graphs

Chapter 11 - Hashing and the Table ADT

Chapter 12 - External Collections of Data

Chapter 13 - Sorting

Chapter 14 - Advanced Recursion

Chapter 15 - Object-Oriented Programming

Chapter 16 - Advanced Software Engineering

Appendix - Math Reference and Tutorial

Although this book's claims to be a book for a second course in computer science, I disagree completely. Although it does have excellent diagrammatical representations of the underlying theory and concepts behind the data structures presented in the book, the explanations are extremely lacking. It is more of a discussion among computer scientists who already understand the concepts presented, as it just touches on a few points and leaves the rest out completely. I am using this book for a Data Structures class (which happens to be the second computer science course offered at my university) and it really has been a painful experience. The problem is that it will show you small pieces of the code needed to implement the data structures, and discusses them in general, but it doesn't give you enough to use if you don't quite understand and want to play around with some simple code until you do. I have had to either use code provided by my professor, or have gone online to find random course websites with a simple implementation of a particular data structure. It seems that, as an introduction to data structures, it fails; and if you already understand the material you would follow the book, but if you already understand it, you wouldn't be reading the book anyway. Skip this book! I wish I had another one to recommend in its place, but I haven't been able to find one.

This book is very poorly organised. The previous reviewer said that Standish emphasized data abstraction and modularity. This is true, but his approach is the typical "give examples and hope the reader learns from just the examples". A better approach would be to say it first before giving the example. Unfortunately Standish does not do this. If you're like me and don't like learning simply from examples, then don't get this book.

This book proved to be a valuable tool to propel me to the next level of understanding of computer science. I gave it four stars because the author skips out on a lot of explanative detail, I felt should of been included, but does an excellent overview/summary of ideas and concepts. I only give it four stars because of it's lack of information. This book is not for the beginner. If you're serious, and want to learn something, then read this one.

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