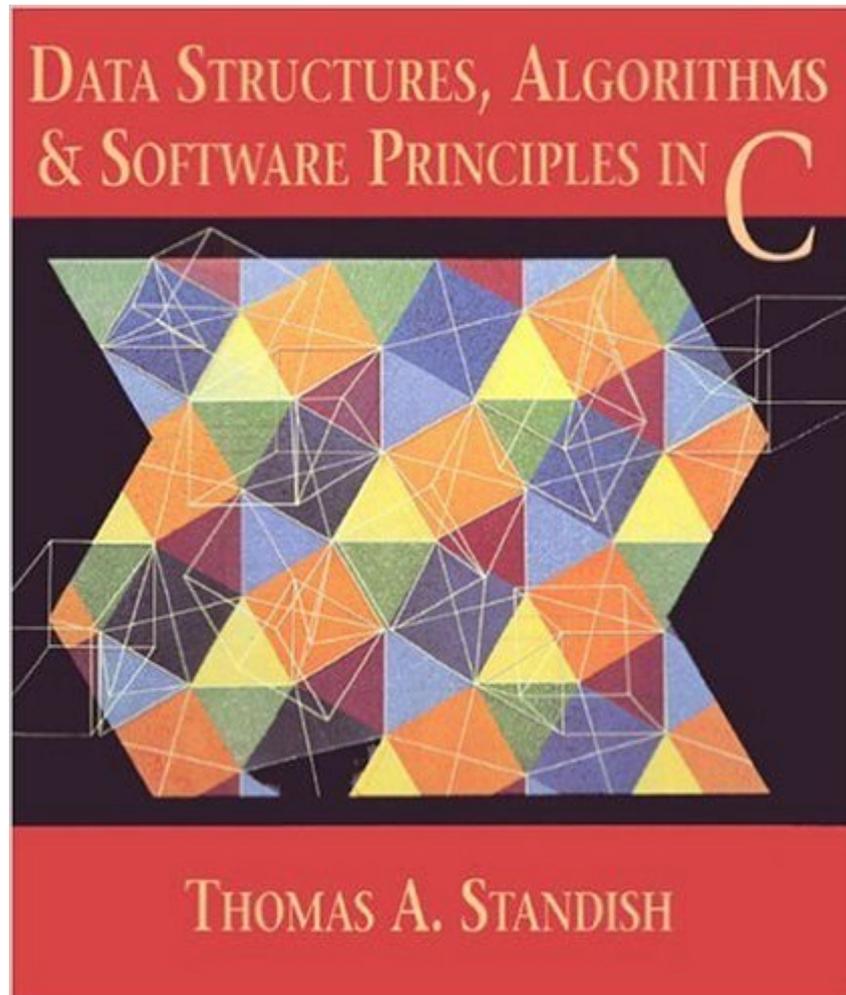# Data Structures, Algorithms, And Software Principles In C

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.

Book Information

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Customer Reviews

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 loosing 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.ContentsChapter 1 - Preparing for the JourneyChapter 2 - Linked Data

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

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.

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.

Not difficult to read, plenty of examples.Does require knowledge of C before reading.

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