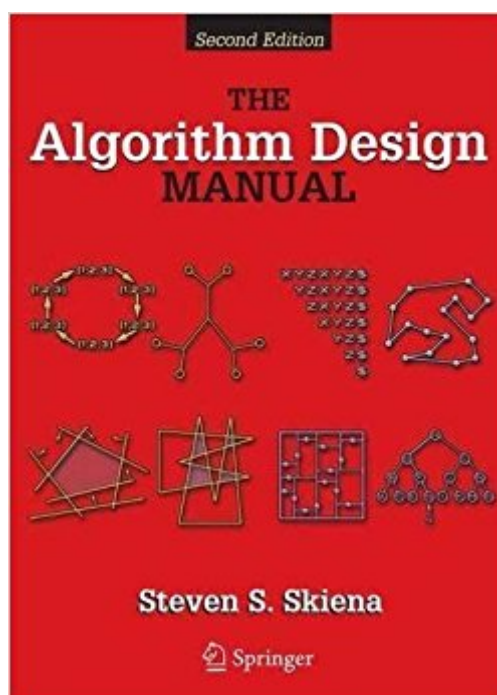The book was found

The Algorithm Design Manual

Synopsis

This newly expanded and updated second edition of the best-selling classic continues to take the "mystery" out of designing algorithms, and analyzing their efficacy and efficiency. Expanding onÃ Â the first edition, the book now serves as the primary textbook of choice for algorithm design courses while maintaining its status as the premier practical reference guide to algorithms for programmers, researchers, and students.The reader-friendlyÃ Â Algorithm Design ManualÃ Â provides straightforward access to combinatorial algorithms technology, stressing design over analysis. The first part,Ã Â Techniques, provides accessible instructionÃ Â on methods for designing and analyzing computer algorithms. The second part,Ã Â Resources, is intended for browsing and reference, and comprises the catalog of algorithmic resources, implementations and an extensive bibliography.NEWÃ Â to the second edition:Ã¢â ¬Â¢Ã Â Doubles the tutorial material and exercisesÃ Â over the first editionÃ¢â ¬Â¢ ProvidesÃ Â full online supportÃ Â for lecturers, and aÃ Â completely updated and improvedÃ Â website component with lecture slides, audio and videoÃ¢â ¬Â¢ Contains aÃ Â unique catalogÃ Â identifying the 75 algorithmic problems that arise most often in practice, leading the reader down the right path to solve themÃ¢â ¬Â¢ Includes severalÃ Â NEWÃ Â "war stories" relating experiences fromÃ Â real-world applicationsÃ¢â ¬Â¢Ã Â Provides up-to-date links leading to the very best algorithmÃ Â implementationsÃ Â available in C, C++, and Java

Book Information

Hardcover: 730 pages

Publisher: Springer; 2nd edition (April 27, 2011)

Language: English

ISBN-10: 1848000693

ISBN-13: 978-1848000698

Product Dimensions: 9.3 x 7 x 1.4 inches

Shipping Weight: 3.6 pounds (View shipping rates and policies)

Average Customer Review: 4.3 out of 5 stars   139 customer reviews

Best Sellers Rank: #15,226 in Books (See Top 100 in Books)   #2 inÃ Â Books > Science & Math > Mathematics > Pure Mathematics > Combinatorics   #7 inÃ Â Books > Science & Math > Mathematics > Pure Mathematics > Discrete Mathematics   #8 inÃ Â Books > Textbooks > Computer Science > Algorithms

Customer Reviews

From the reviews of the second edition:Ã¢â ¬Å"This is detailed and timeless book that I keep reaching for. A useful book that I can not keep access to long enough. It is a important book to have in your library. Unlike other algorithm books that I have the algorithms are written independent of any programming language.Ã¢â ¬Å• (Mary Anne, Cats and Dogs with Data, maryannedata.com, April, 2014)Ã¢â ¬Å"The Algorithm Design Manual by Steven Skiena is aimed at two groups of people: students and professionals. Ã¢â ¬Â¦ It is written in an informal style that I found pleasant and engaging. Ã¢â ¬Â¦ The bookÃ¢â ¬â„¢s unique structure makes it more likely to be immediately useful to the practitioner who has problem to solve and wants to quickly make progress Ã¢â ¬Â¦ . the book succeeds admirably. Ã¢â ¬Â¦ would be helpful to the student who has never seen this material before. Ã¢â ¬Â¦ Overall, I recommend this book warmly.Ã¢â ¬Å• (Neelakantan Kartha, The Book Review Column, 2011)Ã¢â ¬Å"Algorithms are the very heart of computing Ã¢â ¬Â¦ . This book is about right for most people. Ã¢â ¬Â¦ Each of the topics is treated in a readable informal style with lots of asides and accounts of personal experiences - Ã¢â ¬Ëœwar storiesÃ¢â ¬â„¢ in implementing algorithms. Ã¢â ¬Â¦ If you want to use it as a course textbook then there are lots of exercises at the end of every chapter. Highly recommended.Ã¢â ¬Å• (Mike James, I Programmer, September, 2009)"Addressing the main difficulties of solving problems, this book goes far beyond the design of algorithms. It is essential for scientists, engineers, and any professionals who aim to solve problems, with a noticeable emphasis on real problems. It will not only serve as a valuable undergraduate textbook, but it will also become an irreplaceable reference guide for most professionals in the area." (Carlos Linares Lopez, Computing Reviews, February, 2009)"Skiena focuses on the practical aspects of algorithm design and use. Ã¢â ¬Â¦ this work fills an important gap in the knowledge of CS practitioners and students. Ã¢â ¬Â¦ this book is suitable as a text for an undergraduate algorithms class, but also as an invaluable reference for the practicing programmer. Ã¢â ¬Â¦ This second edition has updated the bibliography to include recent works, making it an extensive bibliography. The index is also thorough and very useful for finding specific problems." (William Fahle, ACM Computing Reviews, December, 2008)"For a decade, Steven SkienaÃ¢â ¬â„¢s Algorithm Design Manual retained its title as the best and most comprehensive practical algorithm guide to help identify and solve problems. It is now available in an improved second edition that is worth buying simply for the updates. Ã¢â ¬Â¦ Every programmer should read this book, and anyone working in the field should keep it close to hand. Ã¢â ¬Â¦ Would I recommend it? Absolutely. This is the best investment Ã¢â ¬Â¦ a programmer or aspiring programmer can make." (Harold Thimbleby, Times Higher Education, November, 2008)"My absolute favorite for this kind of interview preparation is Steven SkienaÃ¢â ¬â„¢s The Algorithm

Design Manual. More than any other book it helped me understand just how astonishingly commonplace Ã¢â ¬Â| graph problems are -- they should be part of every working programmerÃ¢â ¬â„¢s toolkit. The book also covers basic data structures and sorting algorithms, which is a nice bonus. Ã¢â ¬Â| every 1 Ã¢â ¬â œ pager has a simple picture, making it easy to remember. This is a great way to learn how to identify hundreds of problem types." (Steve Yegge, Steve YeggeÃ¢â ¬â„¢s Blog, March, 2008)"...the book is an algorithm implementation treasure trove, and putting all of these implementations in one place was no small feat. The list of implementations, an extensive bibliography Ã¢â ¬Â| make the book an invaluable resource for everyone interested in the subject." (ACM Computing Reviews)

....The most comprehensive guide to designing practical and efficient algorithms!....The Algorithm Design Manual, Second Edition"...the book is an algorithm-implementation treasure trove, and putting all of these implementations in one place was no small feat. The list of implementations [and] extensive bibliography make the book an invaluable resource for everyone interested in the subject." --ACM Computing Reviews"It has all the right ingredients: rich contents, friendly, personal language, subtle humor, the right references, and a plethora of pointers to resources."Ã Â -- P. Takis Metaxas, Wellesley College"This is the most approachable book on algorithms I have." -- Megan Squire, Elon University, USAThis newly expanded and updated second edition of the best-selling classic continues to take the "mystery" out of designing algorithms, and analyzing their efficacy and efficiency. Expanding onÃ Â the first edition, the book now serves as the primary textbook of choice for algorithm design courses while maintaining its status as the premier practical reference guide to algorithms for programmers, researchers, and students.The reader-friendly Algorithm Design Manual provides straightforward access to combinatorial algorithms technology, stressing design over analysis. The first part, Techniques, provides accessible instructionÃ Â on methods for designing and analyzing computer algorithms. The second part, Resources, is intended for browsing and reference, and comprises the catalog of algorithmic resources, implementations and an extensive bibliography.NEW to the second edition:Ã¢â ¬Â¢ Doubles the tutorial material and exercises over the first editionÃ¢â ¬Â¢ Provides full online support for lecturers, and a completely updated and improved website component with lecture slides, audio and videoÃ¢â ¬Â¢ Contains a unique catalog identifying the 75 algorithmic problems that arise most often in practice, leading the reader down the right path to solve themÃ¢â ¬Â¢ Includes several NEW "war stories" relating experiences from real-world applicationsÃ¢â ¬Â¢ Provides up-to-date links leading to the very best algorithm implementations available in C, C++, and JavaADDITIONAL Learning

Tools:Ã¢â¬Â¢ Exercises include "job interview problems" from major software companiesÃ¢â¬Â¢ Highlighted take-home lesson boxes emphasize essential conceptsÃ¢â¬Â¢ Provides comprehensive references to both survey articles and the primary literatureÃ¢â¬Â¢ Exercises point to relevant programming contest challenge problemsÃ¢â¬Â¢ Many algorithms presented with actual code (written in C) as well as pseudo-codeÃ¢â¬Â¢ A full set of lecture slides and additional material available at www.algorist.comWritten by a well-known algorithms researcher who received the IEEE Computer Science and Engineering Teaching Award, this new edition of The Algorithm Design Manual is an essential learning tool for students needing a solid grounding in algorithms, as well as a special text/reference for professionals who need an authoritative and insightful guide. Professor Skiena is also author of the popular Springer text, Programming Challenges: The Programming Contest Training Manual.

If you've been sentenced with the CLRS book (Introduction to Algorithms), buy this book in addition!! CLRS has very firm technical descriptions, but The Algorithm Design Manual is simply much more enjoyable and provides a lot of the motivation for using some of the algorithms described in CLRS. The book is simply a delight to read.ALSO: perhaps most importantly, if you are a recent graduate of a computer science program and you are trying to get a job in the field, this is the FIRST book I would recommend to review algorithms and data structures. DO NOT EVEN BOTHER to pick up CLRS (unless specifically directed to do otherwise), as more than likely the questions you will get during the interview will be some variation of the problems that you will encounter in here. I had at least one interview in which all of the problems were derivatives of those mentioned in here; unfortunately I had not yet found this book and so I was rather poorly prepared. When I first picked this up a few months later, I immediately recognized it's value and the fact that this was the only resource I had needed all along.

+Excellent coverage of the material+Great writing style+Lots of sample code+Lots of practice problems+Real world examples of how algorithms are useful as a dev-The C sample code was often hard to read as it appeared to be written for compactness-The licensing around the code samples was unclearI can't overstate the value of the real life examples, "war stories" in the text, and the sample code. The other texts I've been exposed to often skipped working examples and stuck firmly to theory with little to no application. The writing style was probably the best I've read in a textbook.

A classic for anyone who wants to build a solid foundation of algorithm theory and practice. Not a "get smart fast" book. Very solid.

It's a fun and informative read. This is by far the best book on Algorithms! Great teaching style, it covers concept, its application, exercise and links to problem-solving exercises.

If you're interviewing for a programming position at Google, this is the book you want.Ask me how I know. :)This book has almost anything you ever wanted to know about data structures It's pretty easy to read with great explanations and fairly clear code. (Much clearer than any other programming book I've used.)This and Real Time Rendering (https://www..com/Real-Time-Rendering-Third-Tomas-Akenine-Moller/dp/1568814240) are the most oft-used books on my shelf.

I read this book to help me prepare for a technical interview. I was impressed because the book was paced well for me and I could just read it. It was nice that he described how to solve the problem and focused on the best way to think about algorithms. I ended up with a much deeper understanding of graph algorithms and ways to morph an apparently difficult problem into a solved problem. A nice bonus is that dynamic programming no longer feels 'magical' and I have a deeper understanding about when it works and where to apply it. I should note, that frequently memoization achieves the same result.

Excellent book! It's clear, concise, and not too "mathy"--a good reference for the times you need to remind yourself about standard algorithms or determine which one to use for your problem. Theory is balanced with practical use cases, making otherwise heady algorithms accessible and usable. Indeed, it was a go-to reference as I prepared for a coding interview with...wait for it...! :D

Excellent and detailed explanations of both the more elementary, and advanced data structures and sorting that both a comp sci student, seasoned professional can both appreciate and approach. I'm not just saying any of this because I'm a SBU alum, I had never taken the course (Analysis of Algorithms), nor picked up this particular book until I began prepping for an job interview most recently: However, the info and perspectives I'm gleaning from this book, reading a bit everyday as I practice is making me both a better developer, and enabling me to re-approach typical problems with new insight. In other words, it's an amazing book, thank you Skiena!

The Algorithm Design Manual Algorithm Design Algorithm Design: Foundations, Analysis, and Internet Examples Algorithm Design and Applications Graphic Design Success: Over 100 Tips for Beginners in Graphic Design: Graphic Design Basics for Beginners, Save Time and Jump Start Your Success (graphic ... graphic design beginner, design skills) The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World The Connection Algorithm: Take Risks, Defy the Status Quo, and Live Your Passions Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy Emerging Issues of Credit Card Frauds and their Detection Techniques using Genetic Algorithm Data Structures and Algorithm Analysis in Java (3rd Edition) Data Structures & Algorithm Analysis in C++ Data Structures and Algorithm Analysis in C++ (3rd Edition) Data Structures and Algorithm Analysis in C (2nd Edition) Data Structures and Algorithm Analysis in Java (2nd Edition) Design, When Everybody Designs: An Introduction to Design for Social Innovation (Design Thinking, Design Theory) Today's Technician: Manual Transmissions and Transaxles Classroom Manual and Shop Manual, Spiral bound Version Echo Dot: Echo Dot User Manual: From Newbie to Expert in One Hour: Echo Dot 2nd Generation User Guide: (Echo, Dot, Echo Dot, ... Manual, Alexa, User Manual, Echo Dot ebook) The User Manual Manual : How to Research, Write, Test, Edit & Produce a Software Manual (Untechnical Press Books for Writers) Michigan Manual of Plastic Surgery (Lippincott Manual Series (Formerly known as the Spiral Manual Series)) Rolls-Royce Merlin Manual - 1933-50 (all engine models): An insight into the design, construction, operation and maintenance of the legendary World War 2 aero engine (Owners' Workshop Manual)