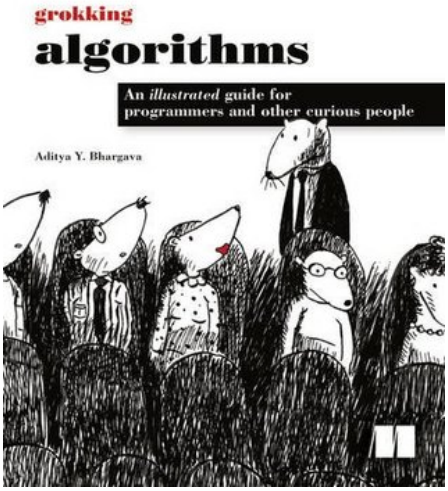

Grokking Algorithms An Illustrated Guide For Programmers and Other Curious People

Aditya Y. Bhargava

Grokking Algorithms An Illustrated Guide For Programmers and Other Curious People

Aditya Y. Bhargava

Grokking Algorithms An Illustrated Guide For Programmers and Other Curious People Aditya Y. Bhargava
An algorithm is nothing more than a step-by-step procedure for solving a problem. The algorithms you'll use most often as a programmer have already been discovered, tested, and proven. If you want to take a hard pass on Knuth's brilliant but impenetrable theories and the dense multi-page proofs you'll find in most textbooks, this is the book for you. This fully-illustrated and engaging guide makes it easy for you to learn how to use algorithms effectively in your own programs.

Grokking Algorithms is a disarming take on a core computer science topic. In it, you'll learn how to apply common algorithms to the practical problems you face in day-to-day life as a programmer. You'll start with problems like sorting and searching. As you build up your skills in thinking algorithmically, you'll tackle more complex concerns such as data compression or artificial intelligence. Whether you're writing business software, video games, mobile apps, or system utilities, you'll learn algorithmic techniques for solving problems that you thought were out of your grasp. For example, you'll be able to:
Write a spell checker using graph algorithms
Understand how data compression works using Huffman coding
Identify problems that take too long to solve with naive algorithms, and attack them with algorithms that give you an approximate answer instead
Each carefully-presented example includes helpful diagrams and fully-annotated code samples in Python. By the end of this book, you will know some of the most widely applicable algorithms as well as how and when to use them.

Grokking Algorithms An Illustrated Guide For Programmers and Other Curious People Details

Date	:	Published 2015 by Manning Publications Co
ISBN	:	9781617292231
Author	:	Aditya Y. Bhargava
Format	:	Paperback 256 pages
Genre	:	Computer Science, Programming, Science, Technology, Algorithms, Nonfiction, Coding, Technical, Computers, Software

From Reader Review Grokking Algorithms An Illustrated Guide For Programmers and Other Curious People for online ebook

Diego Garcia says

A simple and nice introduction to most popular algorithms, if you wanna to know what is an algorithm and which ones are most popular, that is a good book, but if you're looking for a book to help you to write and deep understand algorithms, take a look for other books.

Ananth says

Dont have a CS background and ever wondered what that O(logn) stood for. Fear not, Aditya has your back covered. I have tried several times to learn the basic algorithms and their respective time complexities but have failed miserably. The illustrations and the code samples in Python make it much more lucid to grasp the concepts that are otherwise very ambiguous usually covered with a lot of complexity math. Kudos to Aditya now I am ready to tackle the stanford course by Tim Roughgarden.

David says

A quick engaging introductory read on an important topic. While I'd love to think that I could pick up some authoritative algorithm textbook, my experience self-studying suggests I might not get that far. I still have a pdf of SICP that I've read all of two pages of despite the universal acclaim that book gets.

That being said, Grokking Algorithms is pricey at $44, especially for something you could read in an afternoon. My copy sat around a few months before I read it (albeit in the book eating climate of New Orleans), and the pages were falling out as I finished reading. Pretty shoddy. It has less value as a reference than one might think because it only covers a handful of algorithms. I'd recommend getting it at the library if you're a self-taught programmer wanting a gentle intro to algorithms or are experienced and want a refresher.

Podcast interview with the author: https://talkpython.fm/episodes/show/8...

Matt Grommes says

I read this through the Manning MEAP program. I thoroughly enjoyed it. My only complaint really is that I wish the tree section could have been longer but that might be changed by publication time. I'm a long time programmer with no degree so I missed a lot of the basis in algorithms others have. This is not a textbook but I got a great intro to a lot of important algorithms.

Rostyslav says

MustRead ??? ???? ??? ???? ???????????? ? ??????????? ?? ?????? ????????????!

Tomy Jaya says

I absolutely love the author's visual approach to teaching algorithms. Coupled with a plethora of examples, the bite-sized chapters in this book are ideal for people like me to follow. I would highly recommend this book not only to beginners, but also to experienced developers who want to refresh their algorithms knowledge and ultimately, make it stick.

Liam says

"Which is used more: arrays or lists? Obviously, it depends on the use case. But arrays see a lot of use because they allow random access. There are two different kinds of access: random access and sequential access. Sequential access means reading the elements one by one, starting at the first element. Linked lists can only do sequential access. If you want to read the 10th element of a linked list, you have to read the first 9 elements and follow the links to the 10th element. Random access means you can jump directly to the 10th element. You'll frequently hear me say that arrays are faster at reads. This is because they provide random access. A lot of use cases require random access, so arrays are used a lot. Arrays and lists are used to implement other data structures, too." (30)

"A lot of people tell me that this algorithm seems easy. It's too obvious, so it must be wrong. But that's the beauty of greedy algorithms: they're easy! A greedy algorithm is simple: at each step, pick the optimal move." (144)

Julia Yakutova says

??????? ????? ?? ???????? ? ????????? ??? ????????, ????????? ????? ???????? ?????????. ??? "?-???????" ??????? ???????? ? ????????? ????? ??? ??? ???????? ????????? ?????? ? ? ????? ?????????? ??? ???????????. ??? ????? ??????? ????????? ????? ???????? ?? ?????????? ?? ??????? ??? ?? ????????? ????? ???????????????. ??? ????????? ? ????? ????????? ??????? ?? ??????????. ???? ????????? ???????? ??? ??????????? ???????? ????????????? ???????????????.

Jen Stirrup says

I've just finished reading the Manning book called Grokking Algorithms An Illustrated Guide For Programmers and Other Curious People

This is a very readable book, with great diagrams and a very visual style. I recommend this book for anyone who wants to understand more about algorithms.

This is an excellent book for the budding data scientist who wants to get past the bittiness of learning pieces of open source or proprietary software here and there, and wants to learn what the algorithms actually mean in practice. It's fairly easy to get away with looking like a real Data Scientist if you know bits of R or Python, I think, but when someone scratches the surface of that vision, it can become very apparent that the whole theory and deeper understanding can be missing. This book will help people to bridge the gap from learning bits here and there, to learning what the algorithms actually mean in practice.
Recommended. I'm expecting to find that people might 'pinch' the diagrams but I'd strongly suggest that they contact the author and credit appropriately.
I'd recommend this book, for sure. Enjoy!

Tony Poerio says

This book gives some really excellent and concise descriptions of problems that... when you learn them from your CS professor... seem absurdly (and almost purposely) harder than they need to be. I also really like Aditya's illustration style, and that was what drew me in. It reminds me of "Learn You a Haskell", but focused on Algorithms. Worth the the read.

Adrian Li says

A really good book for an introduction to algorithms. It's written in a way that is easily absorbed by laymen.

Most of the book is filled with interesting and curious cartoons instead of blocks of code. That being said, a basic understanding of programming would help a lot. But probably a very elementary level will suffice; Think codeacademy or the first couple chapters of Eloquent Javascript.

All-in-all, a fantastic primer to get the reader started with computer science. Highly recommended even if it's just for reference or a skim.

Justin says

Interesting supplement to an intro to cs course.

Tomas says

Super great/intuitive explanations if you're trying to get into CS. If you've taken any CS though, most of this will be fairly basic. Look at the table of contents, and read chapters on whatever you don't know

---

Filip says

What I find amazing about this book is author's enthusiasm and will to transfer knowledge to the reader, it feels almost like being in a class (those drawings help too).

I recommend it to everyone with **at least some** programming experience (some programming concepts are explained, but not enough in my opinion) and with none or little knowledge about algorithms. It's a great start to get an overview and basic ideas about things that appear in other books, which explain the material far more complex. This book explains it step-by-step (with even more steps than usually needed).

One negative thing about the book is the presence of some cliffhangers. The author mentions some concepts without even basic explanation what they are. Sure, he says it's out of the book's scope and recommends further investigation, but basic idea in a few sentences could be enough.

Rachel says

The best book I've ever read on algorithms. Also the only book I've ever read on algorithms, but probably for a good reason.

Bharat says

The visual way of explaining algorithms as seen in this book is very appealing and pretty good and one can easily breeze through the content. Human brains grasp visual narrations better. Can be a starter book before delving into more advanced and books such as CLRS.

Tim says

Professional programmers aren't going to learn anything new from this book, but it was a fun read regardless. What struck me as great about this book, is it reads like an ELI5 about algorithms and data structures. If nothing else, it's a great way for one to learn how to teach algorithms to others who aren't in the industry. This is a must read for anyone that's learning to code.

Maru Kun says

Studying algorithms is a lot like studying accountancy - profoundly boring on the surface and still quite boring if you dig beneath. However, if you spend a lot of effort and dig down far enough algorithms can become mildly interesting, if you've got nothing else better to do.

This is an excellent book on algorithms that managed to made them more than just mildly interesting. The book is aimed at the beginner but also touched on more advanced topics and algorithms. It is well written, takes you patiently through required steps and includes some appealing pictures and diagrams. I have finally lost my fear of hash tables and graphs.

The book also includes python code with simple implementations of the algorithms and at the end of it I felt

confident that I could code my own. I can't of course, but at least I felt that I could, which is much better than the overwhelming feeling of blackest despair I usually get after closing an algorithm book.

Vishwanath says

Refreshing new presentation of algorithms. I was intrigued by the visual premise of the book especially at a time when I was looking for a refresher on algorithms. This book is an enjoyable journey through a usually dry topic and the visual illustrations by the author help reinforce concepts.
Its a bit light on examples through actual code but those examples can be easily researched online. The big O notation topics are especially useful.

Biblioworm says

????? ????????? (?????? ??? ? ????????), ??? ??????? ??? ????? ??? ?????????, ?? ????? ? ??????? ???? ??? ???????????, ??? ????? ? ??? ???????? ??? ???????? ????? ?????????.

???? ??????? - ??? ????. ???????? ??? ??????? ??????????, ????? ???? ?? ?????? ?????????????, ??? ????? ?????????, ????? ??????????? ??? ??????.
?? ???? ??????? ?????????? ? ?? ??????? ??? ?? ???????????.

?????? ? ???????? ? ??? ????? ??? ????? ??????, ??? quick sort ?????, ??? merge sort ?? ???? ?? ????????? ? big O ??????? ????????? 8-(

??? ???-?? ? ?????? ?????? ???????? ?????. ???, ??? ? ????????? ?? ????? ??????? ???? ????????-?????????, ??? ?????????? ????. ????? ???????????, ??? ????? ??? "????????", ??????? ? ???????? ?? ????? ?????? ????????????? ????, ?? ????? ?? ????? ????? ? ??? ????????