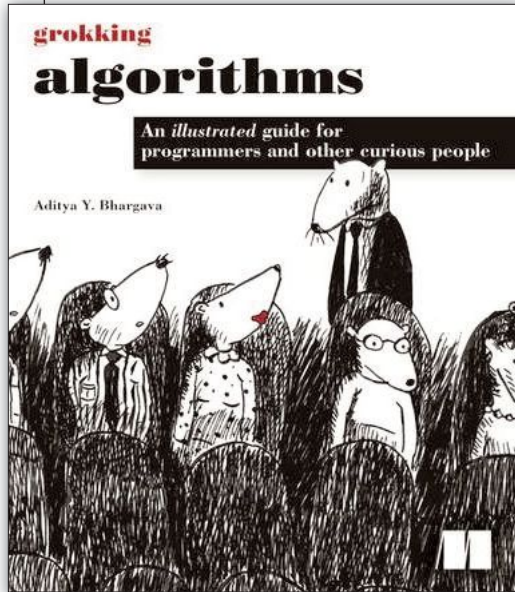


BOOKreview

by Steven Kreuzer



GROKING ALGORITHMS

An illustrated guide for programmers and other curious peopleBy Aditya Y. Bhargava

Publisher.....Manning Publications (2016)

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I purchased a copy of *Grokking Algorithms* on a whim based on a comment I happened to stumble upon on some random post on Hacker News. Because I don't have a computer science background, from time to time I like to challenge myself with small programming exercises, and I figured this book might have some tips and tricks that I could use down the line. When my copy finally arrived, I started to skim through it, and right in the first chapter I found a much better solution to a programming problem I had been working on. I sat down at my computer, replaced my code to search through an array with the simple binary search algorithm described in the book, and finally managed to get this small application to run fast enough that it wasn't getting killed due to excessive execution time when I submitted the code to the programming challenge website for grading. I was thrilled when I finally got a green checkmark next to each of the test cases, and I was immediately hooked on this book.

When you compare *Grokking Algorithms* to other books on the same subject, the first thing you will notice is how thin this book is when you compare it with all the others. This is by design, because the goal of this book is to be an easy on-ramp to learning more about algorithms and to help dispel the myth that algorithms are an obscure and complex subject. In the past, these types of topics were only covered in thick and heavy textbooks, and

the only way to make this material accessible was to have someone with a strong background in math and computer science help guide you through.

What I truly love about this book is that the author does a fantastic job of taking material that on the surface can seem complex and overwhelming to the casual reader, and making it extremely accessible regardless of your technical background. This is accomplished by taking real-world problems and mixing them in with plenty of illustrated explanations. The result is very unique and engaging, especially if you consider yourself to be a visual learner.

Throughout the book the example code provided for each algorithm is presented in Python, but the implementations are easy enough to translate to whatever language you would prefer to work in. Considering the popularity of the algorithms the author chose, I am sure that examples in your preferred language can be easily found. Because of that, instead of just explaining the algorithm, the author spends most chapters detailing the trade-offs you would encounter with each algorithm and focuses more on showing you techniques for problem solving. As a result, a large chunk of Chapter 1 is spent helping the reader get a better understanding about the running time of different algorithms. Big O notation has always been a little confusing to me, and so the parts of this book that provide the most value to me are the seven pages covering algorithm run-

time using very simple explanations and illustrations. The author also included a practical example on how you could visualize Big O runtimes with a few pieces of paper and a pen.

Another interesting feature of this book is that if you buy a hard copy of it, the publisher will throw in a free digital copy as well. For a variety of reasons, I still prefer physical copies of books, especially ones on technical topics. However, from time to time you might find yourself at home wanting to look up something in a book you left at work, or you just might want to give your back a break, and that is when having a digital copy comes in handy. With most other publishers, the cost of the physical and digital copies is almost the same, which makes it hard to justify buying both, and fortunately with Manning Publications, you don't have to make that tough decision. Hopefully, this is something we will see other publishers start to do as well.

If you are new to data structures and algorithms and would like to learn more or just want to experience a very fresh and unique perspective on them, I strongly encourage you to pick up a copy

“Very unique and engaging, especially if you consider yourself to be a visual learner.”



of this book. While *Grokking Algorithms* is a quick read—you can get through it in an afternoon—I have a strong feeling this will be one of those books that you will keep around in your collection and pull off the shelf for a quick refresher every once in a while. While I think I will get plenty of value out of this book as the years go by, what most excites me is anticipating when my daughter is old enough to take my dog-eared copy so that she can work through the chapters in the book, take that knowledge, and apply the same solutions to problems she might be working on. •

STEVEN KREUZER is a FreeBSD Developer and Unix Systems Administrator with an interest in retro-computing and air-cooled Volkswagens. He lives in Queens, New York, with his wife, daughter, and dog.

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