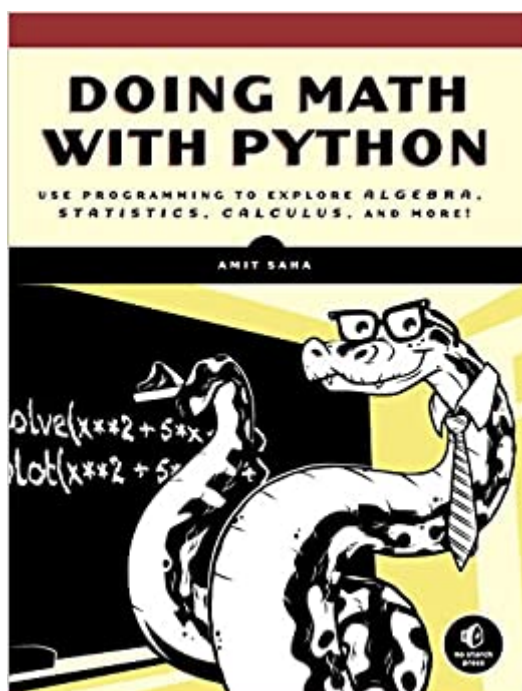


The book was found

Doing Math With Python: Use Programming To Explore Algebra, Statistics, Calculus, And More!



Synopsis

Doing Math with Python shows you how to use Python to delve into high school-level math topics like statistics, geometry, probability, and calculus. You'll start with simple projects, like a factoring program and a quadratic-equation solver, and then create more complex projects once you've gotten the hang of things. Along the way, you'll discover new ways to explore math and gain valuable programming skills that you'll use throughout your study of math and computer science. Learn how to:

- Describe your data with statistics, and visualize it with line graphs, bar charts, and scatter plots
- Explore set theory and probability with programs for coin flips, dicing, and other games of chance
- Solve algebra problems using Python's symbolic math functions
- Draw geometric shapes and explore fractals like the Barnsley fern, the Sierpinski triangle, and the Mandelbrot set
- Write programs to find derivatives and integrate functions

Creative coding challenges and applied examples help you see how you can put your new math and coding skills into practice. You'll write an inequality solver, plot gravity's effect on how far a bullet will travel, shuffle a deck of cards, estimate the area of a circle by throwing 100,000 "darts" at a board, explore the relationship between the Fibonacci sequence and the golden ratio, and more. Whether you're interested in math but have yet to dip into programming or you're a teacher looking to bring programming into the classroom, you'll find that Python makes programming easy and practical. Let Python handle the grunt work while you focus on the math. Uses Python 3

Book Information

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Customer Reviews

"Saha does an excellent job providing a clear link between Python and upper-level math concepts, and demonstrates how Python can be transformed into a mathematical stage. This book deserves a spot on every geometry teacher's bookshelf." — School Library Journal

Amit Saha is a software engineer who has worked for Red Hat and Sun Microsystems. He created and maintains Fedora Scientific, a Linux distribution for scientific and educational users. He is also the author of *Write Your First Program* (Prentice Hall Learning).

I personally think that learning an object oriented language is difficult to learn on you own. I've learned a more from this book than from others. However, I'm still only just starting chapter 6. I'm confident that I'll be able to accomplish writing a few useful Python programs after studying this book.

It's a great, hands on intro to Python and an excellent intro into how to use it for moderately advanced math. Do the examples as you read the book and you'll end up up with a useful skill.

Very inspirational.

Good book, but need to be more detailed at some topics.

Easy to follow and fun.

Good book for python users

I don't always give 5 stars, but when I do, it's for real. Stay coding my friends! Actually, I'm only about half way through the book, but I felt I had to do the review now. After dumping MicroShaft and getting into Linux, I could no longer use VisualBASIC; I had to choose another language and it came down to "C" or Python. I chose Python because I wanted to do some real work without trudging through a 3 year learning curve. Python is, as they say, easy to pick up, especially if you have prior coding experience. You should know the basic Python syntax and structure, basic commands etc., before starting this book; it isn't a "beginners 1st Python" book. But one or two of the "24 hour" or "1 day" starter books will be sufficient. Also, this book is intended for people who want to get into serious math and graphics. If you are into science, engineering, etc., this is for you. VERY well

written and laid out; also, it isn't a big scary 600 page monster that might be intimidating to pick up and start - it's only 200 pages and there is no wasted space. A lot is said in minimal volume (I always like that). You will continue to learn Python as you proceed; also you will learn about math, graphics, and some physics as well. Most important - you will see how you can use Python to solve real world math problems and apply this to whatever you are doing. It starts out simple with basic math functions, then rapidly progresses to graphing equations, then statistics; later on complex graphics (fractals - my thing), and calculus. Right now this is brain workout and fun for me, but I hope to use it later for work. The book is very easy to follow as you move along. You should use an interactive python editor (like Idle3) rather than try to run from the command line, although you can do that if you want. One thing you can do is copy all the code snippets [after understanding them and perhaps modifying a little] and collect them all in a personal python module which you can then use forever. Also, as you run the code snippets and play with them as you proceed through the book, you can experiment and modify / run them on the spot "this is a good way to learn" to stamp it into your brain in a way you will remember. Fairly early in the book is a function which calculates and then graphically plots the trajectory of a thrown baseball; the technique is the same for any projectile. I was able to modify it a bit, put it in a loop, and graph the trajectory(s) for an object thrown at all angles from 0- \rightarrow 90°. I was thus able to "prove" graphically something that is already well known "all other factors equal, a projectile will travel farthest when launched up at a 45° angle. Cool! If you are in a science or engineering field and want to learn Python for that - I can't over-recommend this book! Cheers.

Doing Math with Python is a new title from No Starch Press, and again a book from this editor doesn't disappoint, somehow No Starch seems to have the expertise to pick the best writers for their catalogue and I think I am yet to find a title from them that I don't enjoy reading cover to cover. DMWP is not an advanced python book and it doesn't claim to be, it is a book introducing the utility of python to address mathematical problems, and does so extremely well. The book introduces you to tools in python that can be used to address problems in symbolic math, calculus, algebra and related fields (statistics for example). It is full of nicely explained examples and serves as both a python book and Calculus and Algebra refresher. I think the main target for the book would be college students or people looking to refresh their knowledge in maths and wanting to replace their Ti84 calculator with a laptop with python.

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