

Effective Python 59 Specific Ways To Write Better Python Effective Software Development

Python CookbookMatplotlib for Python DevelopersViolent PythonLearning PythonLearn Python 3 the Hard WayPython 3 Object Oriented ProgrammingEffective C++Effective PythonFluent PythonEffective PythonModular Programming with PythonEffective PythonEffective DebuggingExpert Python ProgrammingLearn More Python 3 the Hard WayPython TricksEffective Enterprise JavaThe Hitchhiker's Guide to PythonFluent PythonCode ReadingPractical Python Design PatternsEffective SQLEffective Objective-C 2.0Introducing PythonWriting Idiomatic Python 3.3Python Essential ReferencePython in PracticeA Primer on Scientific Programming with PythonPhysics of Continuous Matter, Second EditionPython for the Busy Java DeveloperUsing Asyncio in PythonEffective TypeScriptTrevor WyeData Science Job: How to become a Data ScientistEffective JavaScriptEffective Computation in PhysicsLearning Python Design PatternsEffective RubyMultiplayer Game Programming

Python Cookbook

You Will Learn Python 3! Zed Shaw has perfected the world's best system for learning Python 3. Follow it and you will succeed—just like the millions of beginners Zed has taught to date! You bring the discipline, commitment, and persistence; the author supplies everything else. In Learn Python 3 the Hard Way, you'll learn Python by working through 52 brilliantly crafted exercises. Read them. Type their code precisely. (No copying and pasting!) Fix your mistakes. Watch the programs run. As you do, you'll learn how a computer works; what good programs look like; and how to read, write, and think about code. Zed then teaches you even more in 5+ hours of video where he shows you how to break, fix, and debug your code—live, as he's doing the exercises. Install a complete Python environment Organize and write code Fix and break code Basic mathematics Variables Strings and text Interact with users Work with files Looping and logic Data structures using lists and dictionaries Program design Object-oriented programming Inheritance and composition Modules, classes, and objects Python packaging Automated testing Basic game development Basic web development It'll be hard at first. But soon, you'll just get it—and that will feel great! This course will reward you for every minute you put into it. Soon, you'll know one of the world's most powerful, popular programming languages. You'll be a Python programmer. This Book Is Perfect For Total beginners with zero programming experience Junior developers who know one or two languages Returning professionals who haven't written code in years Seasoned professionals looking for a fast, simple, crash course in Python 3

Matplotlib for Python Developers

Are you a seasoned Java developer who wishes to learn Python? Perhaps you've just joined a project where a chunk of system integration code is written in Python. Or maybe you need to implement a report generation module in the next sprint and your colleague mentioned that Python would be the perfect tool for the job. In any case, if you are in a situation where you have to pick up the Python programming language overnight, this book is just for you! Hit the ground running and gain a fast-paced overview of what the Python language is all about, the syntax that it uses and the ecosystem of libraries and tools that surround the language. This concise book doesn't spend time on details from an introductory programming course or document every single Python feature. Instead, Python for the Busy Java Developer is designed for experienced Java developers to obtain sufficient familiarity with the language and dive into coding, quickly. What You'll Learn Discover the fundamentals of the core Python language and how they compare to Java Understand Python syntax and the differences between Python 2.x and 3.x Explore the Python ecosystem, its standard libraries, and how to implement them Who This Book Is For Working programmers who are comfortable with Java or another object-oriented programming language such as C#

Violent Python

The "Writing Idiomatic Python" book is finally here! Chock full of code samples, you'll learn the "Pythonic" way to accomplish common tasks. Each idiom comes with a detailed description, example code showing the "wrong" way to do it, and code for the idiomatic, "Pythonic" alternative. *This version of the book is for Python 3.3+. There is also a Python 2.7.3+ version available.* "Writing Idiomatic Python" contains the most common and important Python idioms in a format that maximizes identification and understanding. Each idiom is presented as a recommendation to write some commonly used piece of code. It is followed by an explanation of why the idiom is important. It also contains two code samples: the "Harmful" way to write it and the "Idiomatic" way. * The "Harmful" way helps you identify the idiom in your own code. * The "Idiomatic" way shows you how to easily translate that code into idiomatic Python. This book is perfect for you: * If you're coming to Python from another programming language * If you're learning Python as a first programming language * If you're looking to increase the readability, maintainability, and correctness of your Python code What is "Idiomatic" Python? Every programming language has its own idioms. Programming language idioms are nothing more than the generally accepted way of writing a certain piece of code. Consistently writing idiomatic code has a number of important benefits: * Others can read and understand your code easily * Others can maintain and enhance your code with minimal effort * Your code will contain fewer bugs * Your code will teach others to write correct code without any effort on your part

Learning Python

Get a comprehensive, in-depth introduction to the core Python language with this hands-on book. Based on author Mark

Lutz's popular training course, this updated fifth edition will help you quickly write efficient, high-quality code with Python. It's an ideal way to begin, whether you're new to programming or a professional developer versed in other languages. Complete with quizzes, exercises, and helpful illustrations, this easy-to-follow, self-paced tutorial gets you started with both Python 2.7 and 3.3—the latest releases in the 3.X and 2.X lines—plus all other releases in common use today. You'll also learn some advanced language features that recently have become more common in Python code. Explore Python's major built-in object types such as numbers, lists, and dictionaries Create and process objects with Python statements, and learn Python's general syntax model Use functions to avoid code redundancy and package code for reuse Organize statements, functions, and other tools into larger components with modules Dive into classes: Python's object-oriented programming tool for structuring code Write large programs with Python's exception-handling model and development tools Learn advanced Python tools, including decorators, descriptors, metaclasses, and Unicode processing

Learn Python 3 the Hard Way

CD-ROM contains cross-referenced code.

Python 3 Object Oriented Programming

Physics of Continuous Matter: Exotic and Everyday Phenomena in the Macroscopic World, Second Edition provides an introduction to the basic ideas of continuum physics and their application to a wealth of macroscopic phenomena. The text focuses on the many approximate methods that offer insight into the rich physics hidden in fundamental continuum mechanics equations. Like its acclaimed predecessor, this second edition introduces mathematical tools on a "need-to-know" basis. New to the Second Edition This edition includes three new chapters on elasticity of slender rods, energy, and entropy. It also offers more margin drawings and photographs and improved images of simulations. Along with reorganizing much of the material, the author has revised many of the physics arguments and mathematical presentations to improve clarity and consistency. The collection of problems at the end of each chapter has been expanded as well. These problems further develop the physical and mathematical concepts presented. With worked examples throughout, this book clearly illustrates both qualitative and quantitative physics reasoning. It emphasizes the importance in understanding the physical principles behind equations and the conditions underlying approximations. A companion website provides a host of ancillary materials, including software programs, color figures, and additional problems.

Effective C++

Introducing modular techniques for building sophisticated programs using Python About This Book The book would help you

develop succinct, expressive programs using modular design The book would explain best practices and common idioms through carefully explained and structured examples It will have broad appeal as far as target audience is concerned and there would be take away for all beginners to Python Who This Book Is For This book is intended for beginner to intermediate level Python programmers who wish to learn how to use modules and packages within their programs. While readers must understand the basics of Python programming, no knowledge of modular programming techniques is required. What You Will Learn Learn how to use modules and packages to organize your Python code Understand how to use the import statement to load modules and packages into your program Use common module patterns such as abstraction and encapsulation to write better programs Discover how to create self-testing Python packages Create reusable modules that other programmers can use Learn how to use GitHub and the Python Package Index to share your code with other people Make use of modules and packages that others have written Use modular techniques to build robust systems that can handle complexity and changing requirements over time In Detail Python has evolved over the years and has become the primary choice of developers in various fields. The purpose of this book is to help readers develop readable, reliable, and maintainable programs in Python. Starting with an introduction to the concept of modules and packages, this book shows how you can use these building blocks to organize a complex program into logical parts and make sure those parts are working correctly together. Using clearly written, real-world examples, this book demonstrates how you can use modular techniques to build better programs. A number of common modular programming patterns are covered, including divide-and-conquer, abstraction, encapsulation, wrappers and extensibility. You will also learn how to test your modules and packages, how to prepare your code for sharing with other people, and how to publish your modules and packages on GitHub and the Python Package Index so that other people can use them. Finally, you will learn how to use modular design techniques to be a more effective programmer. Style and approach This book will be simple and straightforward, focusing on imparting learning through a wide array of examples that the readers can put into use as they read through the book. They should not only be able to understand the way modules help in improving development, but they should also be able to improvise on their techniques of writing concise and effective code.

Effective Python

5+ Hours of Video Instruction Effective Python LiveLessons Video Training offers developers insight into the Pythonic way of writing programs, building on the viewer's fundamental understanding of Python to help him or her write programs more effectively. Description Effective Python LiveLessons Video Training is based on the book Effective Python written by Google software engineer Brett Slatkin for the Effective Software Development Series. Each lesson contains a broad but related set of items. Each item is designed to provide concise and specific guidance on what to do and what to avoid when writing programs using Python. Hands-on demonstration helps the viewer understand how to put each item into action. Each of the video's six lessons includes items focused on a key topic. The video starts with items focused on how to make more

efficient use of expressions and statements before moving on to lessons that teach viewers how to better use comprehensions and generators, functions, and classes. Next, the training teaches viewers how to solve problems associated with concurrency and parallelism. Finally, the focus switches to how to make Python programs more robust. After watching this video, Python programmers will have the knowledge necessary to really master the language and apply the advice, tips, and tricks learned from the video to the Python programs they're writing, immediately improving the quality of their code. The source code repository for this LiveLesson is located at <https://github.com/bslatkin/effectivepython/blob/master/VIDEO.md>. About the Instructor Brett Slatkin is a Senior Staff Software Engineer at Google and the engineering lead and co-founder of Google Consumer Surveys. Slatkin formerly worked on Google App Engine's Python infrastructure. He is the co-creator of the PubSubHubbub protocol. Nine years ago, he cut his teeth using Python to manage Google's enormous fleet of servers. Outside of his day job, he works on open source tools and writes about software, bicycles, and other topics on his personal website. He earned his B.S. in Computer Engineering from Columbia University in the City of New York. He lives in San Francisco.

Skill Level Intermediate to Advanced

What You Will Learn

- Methods for using expressions and statements more efficiently
- How to make better use of comprehensions and generators
- How to make better use of functions and classes
- Methods for working with concurrency and parallelism
- How to make your program

Fluent Python

If you need help writing programs in Python 3, or want to update older Python 2 code, this book is just the ticket. Packed with practical recipes written and tested with Python 3.3, this unique cookbook is for experienced Python programmers who want to focus on modern tools and idioms. Inside, you'll find complete recipes for more than a dozen topics, covering the core Python language as well as tasks common to a wide variety of application domains. Each recipe contains code samples you can use in your projects right away, along with a discussion about how and why the solution works. Topics include: Data Structures and Algorithms Strings and Text Numbers, Dates, and Times Iterators and Generators Files and I/O Data Encoding and Processing Functions Classes and Objects Metaprogramming Modules and Packages Network and Web Programming Concurrency Utility Scripting and System Administration Testing, Debugging, and Exceptions C Extensions

Effective Python

Every software developer and IT professional understands the crucial importance of effective debugging. Often, debugging consumes most of a developer's workday, and mastering the required techniques and skills can take a lifetime. In *Effective Debugging*, Diomidis Spinellis helps experienced programmers accelerate their journey to mastery, by systematically categorizing, explaining, and illustrating the most useful debugging methods, strategies, techniques, and tools. Drawing on

more than thirty-five years of experience, Spinellis expands your arsenal of debugging techniques, helping you choose the best approaches for each challenge. He presents vendor-neutral, example-rich advice on general principles, high-level strategies, concrete techniques, high-efficiency tools, creative tricks, and the behavioral traits associated with effective debugging. Spinellis's 66 expert techniques address every facet of debugging and are illustrated with step-by-step instructions and actual code. He addresses the full spectrum of problems that can arise in modern software systems, especially problems caused by complex interactions among components and services running on hosts scattered around the planet. Whether you're debugging isolated runtime errors or catastrophic enterprise system failures, this guide will help you get the job done—more quickly, and with less pain. Key features include High-level strategies and methods for addressing diverse software failures Specific techniques to apply when programming, compiling, and running code Better ways to make the most of your debugger General-purpose skills and tools worth investing in Advanced ideas and techniques for escaping dead-ends and the maze of complexity Advice for making programs easier to debug Specialized approaches for debugging multithreaded, asynchronous, and embedded code Bug avoidance through improved software design, construction, and management

Effective Python

Harness the power of Python 3 objects.

Modular Programming with Python

“It's uncommon to have a programming language wonk who can speak in such comfortable and friendly language as David does. His walk through the syntax and semantics of JavaScript is both charming and hugely insightful; reminders of gotchas complement realistic use cases, paced at a comfortable curve. You'll find when you finish the book that you've gained a strong and comprehensive sense of mastery.” —Paul Irish, developer advocate, Google Chrome “This is not a book for those looking for shortcuts; rather it is hard-won experience distilled into a guided tour. It's one of the few books on JS that I'll recommend without hesitation.” —Alex Russell, TC39 member, software engineer, Google In order to truly master JavaScript, you need to learn how to work effectively with the language's flexible, expressive features and how to avoid its pitfalls. No matter how long you've been writing JavaScript code, Effective JavaScript will help deepen your understanding of this powerful language, so you can build more predictable, reliable, and maintainable programs. Author David Herman, with his years of experience on Ecma's JavaScript standardization committee, illuminates the language's inner workings as never before—helping you take full advantage of JavaScript's expressiveness. Reflecting the latest versions of the JavaScript standard, the book offers well-proven techniques and best practices you'll rely on for years to come. Effective JavaScript is organized around 68 proven approaches for writing better JavaScript, backed by concrete examples. You'll learn how to

choose the right programming style for each project, manage unanticipated problems, and work more successfully with every facet of JavaScript programming from data structures to concurrency. Key features include Better ways to use prototype-based object-oriented programming Subtleties and solutions for working with arrays and dictionary objects Precise and practical explanations of JavaScript's functions and variable scoping semantics Useful JavaScript programming patterns and idioms, such as options objects and method chaining In-depth guidance on using JavaScript's unique "run-to-completion" approach to concurrency

Effective Python

Effective SQL brings together the hands-on solutions and practical insights you need to solve a wide range of complex problems with SQL, and to design databases that make it far easier to manage data in the future. Leveraging the proven format of the best-selling Effective series, it focuses on providing clear, practical explanations, expert tips, and plenty of realistic examples -- all in full color. Drawing on their immense experience as consultants and instructors, three world-class database experts identify specific challenges, and distill each solution into five pages or less. Throughout, they provide well-annotated SQL code designed for all leading platforms, as well as code for specific implementations ranging from SQL Server to Oracle and MySQL, wherever these vary or permit you to achieve your goal more efficiently. Going beyond mere syntax, the authors also show how to avoid poor database design that makes it difficult to write effective SQL, how to improve suboptimal designs, and how to work around designs you can't change. You'll also find detailed sections on filtering and finding data, aggregation, subqueries, and metadata, as well as specific solutions for everything from listing products to scheduling events and defining data hierarchies. Simply put, if you already know the basics of SQL, Effective SQL will help you become a world-class SQL problem-solver.

Effective Debugging

This is a practical, hands-on book, with a lot of code and images. It presents the real code that generates every image and describes almost every single line of it, so that you know exactly what's going on. Introductory, descriptive, and theoretical parts are mixed with examples, so that reading and understanding them is easy. All of the examples build gradually with code snippets, their explanations, and plot images where necessary with the complete code and output presented at the end. This book is essentially for Python developers who have a good knowledge of Python; no knowledge of Matplotlib is required. You will be creating 2D plots using Matplotlib in no time at all.

Expert Python Programming

The Practical Guide to Building Reliable Networked Multiplayer Games Networked multiplayer games are a multibillion dollar business: some games now attract tens of millions of players. In this practical, code-rich guide, Joshua Glazer and Sanjay Madhav guide you through every aspect of engineering them. Drawing on their immense experience as both game developers and instructors, the authors lead you through building a robust multiplayer architecture, and creating every engine-level system. You'll learn through in-depth working code examples for two complete games: an action game and a real time strategy (RTS) game. First, Madhav and Glazer review the essentials of networking and network programming from the standpoint of game developers. Next, they walk through managing game data transmission, updating game objects across the network, and organizing the devices that join your game. You'll learn how to ensure reliable performance despite the Internet's inherent inconsistencies, and how to design game code for maximum security and scalability. The authors conclude by addressing two increasingly crucial issues: incorporating gamer services and hosting your games in the cloud. This guide's content has been extensively tested through the authors' multiplayer game programming courses at USC. It is equally valuable both to students and to working game programmers moving into networked games. Coverage includes How games have evolved to meet the challenges of networked environments Using Internet communication protocols and standards in game development Working with Berkeley Socket, the most widely used networking construct in multiplayer gaming Formatting game data for efficient Internet transmission Synchronizing states so all players share the same world Organizing networking topologies for large-scale games Overcoming latency and jitter problems that cause delays or lost data Scaling games without compromising performance Combating security vulnerabilities and software cheats Leveraging the networking functionality of the popular Unreal 4 and Unity game engines Integrating gamer services such as matchmaking, achievements, and leaderboards Running game servers in the cloud About the Website C++ source code for all examples is available at github.com/MultiplayerBook . Instructors will also find a full set of PowerPoint slides and a sample syllabus.

Learn More Python 3 the Hard Way

Easy to understand and fun to read, this updated edition of Introducing Python is ideal for beginning programmers as well as those new to the language. Author Bill Lubanovic takes you from the basics to more involved and varied topics, mixing tutorials with cookbook-style code recipes to explain concepts in Python 3. End-of-chapter exercises help you practice what you've learned. You'll gain a strong foundation in the language, including best practices for testing, debugging, code reuse, and other development tips. This book also shows you how to use Python for applications in business, science, and the arts, using various Python tools and open source packages.

Python Tricks

"It's easy to start writing code with Python: that's why the language is so immensely popular. However, Python has unique strengths, charms, and expressivity that can be hard to grasp at first -- as well as hidden pitfalls that can easily trip you up if you aren't aware of them. Effective Python will help you harness the full power of Python to write exceptionally robust, efficient, maintainable, and well-performing code. Utilizing the concise, scenario-driven style pioneered in Scott Meyers's best-selling Effective C++, Brett Slatkin brings together 53 Python best practices, tips, shortcuts, and realistic code examples from expert programmers. Through realistic examples, Slatkin uncovers little-known Python quirks, intricacies, and idioms that powerfully impact code behavior and performance. You'll learn how to choose the most efficient and effective way to accomplish key tasks when multiple options exist, and how to write code that's easier to understand, maintain, and improve. Drawing on his deep understanding of Python's capabilities, Slatkin offers practical advice for each major area of development with both Python 3.x and Python 2.x. Coverage includes: * Algorithms * Objects * Concurrency * Collaboration * Built-in modules * Production techniques * And more Each section contains specific, actionable guidelines organized into items, each with carefully worded advice supported by detailed technical arguments and illuminating examples. Using Effective Python, you can systematically improve all the Python code you write: not by blindly following rules or mimicking incomprehensible idioms, but by gaining a deep understanding of the technical reasons why they make sense."--[Source inconnue].

Effective Enterprise Java

Transform Your Ideas into High-Quality Python Code! Zed Shaw has perfected the world's best system for becoming a truly effective Python 3.x developer. Follow it and you will succeed—just like the tens of millions of programmers he's already taught. You bring the discipline, commitment, and persistence; the author supplies everything else. In Learn Python 3 the Hard Way, Zed Shaw taught you the basics of Programming with Python 3. Now, in Learn More Python 3 the Hard Way, you'll go far beyond the basics by working through 52 brilliantly crafted projects. Each one helps you build a key practical skill, combining demos to get you started and challenges to deepen your understanding. Zed then teaches you even more in 12 hours of online videos, where he shows you how to break, fix, and debug your code. First, you'll discover how to analyze a concept, idea, or problem to implement in software. Then, step by step, you'll learn to design solutions based on your analyses and implement them as simply and elegantly as possible. Throughout, Shaw stresses process so you can get started and build momentum, creativity to solve new problems, and quality so you'll build code people can rely on. Manage complex projects with a programmer's text editor Leverage the immense power of data structures Apply algorithms to process your data structures Master indispensable text parsing and processing techniques Use SQL to efficiently and logically model stored data Learn powerful command-line tools and skills Combine multiple practices in complete projects It'll be hard at first. But soon, you'll just get it—and that will feel great! This course will reward you for every minute you put into it. Soon, you'll go beyond merely writing code that runs: you'll craft high-quality Python code that solves real problems.

You'll be a serious Python programmer. Perfect for Everyone Who's Already Started Working with Python, including Junior Developers and Seasoned Python Programmers Upgrading to Python 3.6+ Register your product at informit.com/register for convenient access to downloads, updates, and/or corrections as they become available.

The Hitchhiker's Guide to Python

The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example and problem-oriented, where the applications are taken from mathematics, numerical calculus, statistics, physics, biology and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book. Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science. From the reviews: Langtangen does an excellent job of introducing programming as a set of skills in problem solving. He guides the reader into thinking properly about producing program logic and data structures for modeling real-world problems using objects and functions and embracing the object-oriented paradigm. Summing Up: Highly recommended. F. H. Wild III, Choice, Vol. 47 (8), April 2010 Those of us who have learned scientific programming in Python 'on the streets' could be a little jealous of students who have the opportunity to take a course out of Langtangen's Primer." John D. Cook, The Mathematical Association of America, September 2011 This book goes through Python in particular, and programming in general, via tasks that scientists will likely perform. It contains valuable information for students new to scientific computing and would be the perfect bridge between an introduction to programming and an advanced course on numerical methods or computational science. Alex Small, IEEE, CiSE Vol. 14 (2), March /April 2012 "This fourth edition is a wonderful, inclusive textbook that covers pretty much everything one needs to know to go from zero to fairly sophisticated scientific programming in Python" Joan Horvath, Computing Reviews, March 2015

Fluent Python

"I don't even feel like I've scratched the surface of what I can do with Python" With Python Tricks: The Book you'll discover Python's best practices and the power of beautiful & Pythonic code with simple examples and a step-by-step narrative. You'll get one step closer to mastering Python, so you can write beautiful and idiomatic code that comes to you naturally. Learning the ins and outs of Python is difficult-and with this book you'll be able to focus on the practical skills that really matter. Discover the "hidden gold" in Python's standard library and start writing clean and Pythonic code today. Who Should

Read This Book: If you're wondering which lesser known parts in Python you should know about, you'll get a roadmap with this book. Discover cool (yet practical!) Python tricks and blow your coworkers' minds in your next code review. If you've got experience with legacy versions of Python, the book will get you up to speed with modern patterns and features introduced in Python 3 and backported to Python 2. If you've worked with other programming languages and you want to get up to speed with Python, you'll pick up the idioms and practical tips you need to become a confident and effective Pythonista. If you want to make Python your own and learn how to write clean and Pythonic code, you'll discover best practices and little-known tricks to round out your knowledge. What Python Developers Say About The Book: "I kept thinking that I wished I had access to a book like this when I started learning Python many years ago." - Mariatta Wijaya, Python Core Developer "This book makes you write better Python code!" - Bob Belderbos, Software Developer at Oracle "Far from being just a shallow collection of snippets, this book will leave the attentive reader with a deeper understanding of the inner workings of Python as well as an appreciation for its beauty." - Ben Felder, Pythonista "It's like having a seasoned tutor explaining, well, tricks!" - Daniel Meyer, Sr. Desktop Administrator at Tesla Inc.

Code Reading

Violent Python shows you how to move from a theoretical understanding of offensive computing concepts to a practical implementation. Instead of relying on another attacker's tools, this book will teach you to forge your own weapons using the Python programming language. This book demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts. It also shows how to write code to intercept and analyze network traffic using Python, craft and spoof wireless frames to attack wireless and Bluetooth devices, and how to data-mine popular social media websites and evade modern anti-virus. Demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts Write code to intercept and analyze network traffic using Python. Craft and spoof wireless frames to attack wireless and Bluetooth devices Data-mine popular social media websites and evade modern anti-virus

Practical Python Design Patterns

"Each item in Slatkin's Effective Python teaches a self-contained lesson with its own source code. This makes the book random-access: Items are easy to browse and study in whatever order the reader needs. I will be recommending Effective Python to students as an admirably compact source of mainstream advice on a very broad range of topics for the intermediate Python programmer." —Brandon Rhodes, software engineer at Dropbox and chair of PyCon 2016-2017 It's easy to start coding with Python, which is why the language is so popular. However, Python's unique strengths, charms, and expressiveness can be hard to grasp, and there are hidden pitfalls that can easily trip you up. Effective Python will help you

master a truly “Pythonic” approach to programming, harnessing Python’s full power to write exceptionally robust and well-performing code. Using the concise, scenario-driven style pioneered in Scott Meyers’ best-selling Effective C++, Brett Slatkin brings together 59 Python best practices, tips, and shortcuts, and explains them with realistic code examples. Drawing on years of experience building Python infrastructure at Google, Slatkin uncovers little-known quirks and idioms that powerfully impact code behavior and performance. You’ll learn the best way to accomplish key tasks, so you can write code that’s easier to understand, maintain, and improve. Key features include Actionable guidelines for all major areas of Python 3.x and 2.x development, with detailed explanations and examples Best practices for writing functions that clarify intention, promote reuse, and avoid bugs Coverage of how to accurately express behaviors with classes and objects Guidance on how to avoid pitfalls with metaclasses and dynamic attributes More efficient approaches to concurrency and parallelism Better techniques and idioms for using Python’s built-in modules Tools and best practices for collaborative development Solutions for debugging, testing, and optimization in order to improve quality and performance

Effective SQL

Python Essential Reference is the definitive reference guide to the Python programming language — the one authoritative handbook that reliably untangles and explains both the core Python language and the most essential parts of the Python library. Designed for the professional programmer, the book is concise, to the point, and highly accessible. It also includes detailed information on the Python library and many advanced subjects that is not available in either the official Python documentation or any other single reference source. Thoroughly updated to reflect the significant new programming language features and library modules that have been introduced in Python 2.6 and Python 3, the fourth edition of Python Essential Reference is the definitive guide for programmers who need to modernize existing Python code or who are planning an eventual migration to Python 3. Programmers starting a new Python project will find detailed coverage of contemporary Python programming idioms. This fourth edition of Python Essential Reference features numerous improvements, additions, and updates: Coverage of new language features, libraries, and modules Practical coverage of Python's more advanced features including generators, coroutines, closures, metaclasses, and decorators Expanded coverage of library modules related to concurrent programming including threads, subprocesses, and the new multiprocessing module Up-to-the-minute coverage of how to use Python 2.6’s forward compatibility mode to evaluate code for Python 3 compatibility Improved organization for even faster answers and better usability Updates to reflect modern Python programming style and idioms Updated and improved example code Deep coverage of low-level system and networking library modules — including options not covered in the standard documentation

Effective Objective-C 2.0

This book takes a tutorial-based and user-friendly approach to covering Python design patterns. Its concise presentation means that in a short space of time, you will get a good introduction to various design patterns. If you are an intermediate level Python user, this book is for you. Prior knowledge of Python programming is essential. Some knowledge of UML is also required to understand the UML diagrams which are used to describe some design patterns.

Introducing Python

Python's simplicity lets you become productive quickly, but this often means you aren't using everything it has to offer. With this hands-on guide, you'll learn how to write effective, idiomatic Python code by leveraging its best—and possibly most neglected—features. Author Luciano Ramalho takes you through Python's core language features and libraries, and shows you how to make your code shorter, faster, and more readable at the same time. Many experienced programmers try to bend Python to fit patterns they learned from other languages, and never discover Python features outside of their experience. With this book, those Python programmers will thoroughly learn how to become proficient in Python 3. This book covers:

- Python data model: understand how special methods are the key to the consistent behavior of objects
- Data structures: take full advantage of built-in types, and understand the text vs bytes duality in the Unicode age
- Functions as objects: view Python functions as first-class objects, and understand how this affects popular design patterns
- Object-oriented idioms: build classes by learning about references, mutability, interfaces, operator overloading, and multiple inheritance
- Control flow: leverage context managers, generators, coroutines, and concurrency with the `concurrent.futures` and `asyncio` packages
- Metaprogramming: understand how properties, attribute descriptors, class decorators, and metaclasses work

Writing Idiomatic Python 3.3

"With this book, Ted Neward helps you make the leap from being a good Java enterprise developer to a great developer!"
--John Crupi, Sun Distinguished Engineer coauthor, *Core J2EE Patterns*

If you want to build better Java enterprise applications and work more efficiently, look no further. Inside, you will find an accessible guide to the nuances of Java 2 Platform, Enterprise Edition (J2EE) development. Learn how to:

- Use in-process or local storage to avoid the network, see item 44
- Set lower isolation levels for better transactional throughput, see item 35
- Use Web services for open integration, see item 22
- Consider your lookup carefully, see item 16
- Pre-generate content to minimize processing, see item 55
- Utilize role-based authorization, see item 63
- Be robust in the face of failure, see item 7
- Employ independent JREs for side-by-side versioning, see item 69

Ted Neward provides you with 75 easily digestible tips that will help you master J2EE development on a systemic and architectural level. His panoramic look at the good, the bad, and the ugly aspects of J2EE development will address your most pressing concerns. Learn how to design your enterprise systems so they adapt to future demands.

Improve the efficiency of your code without compromising its correctness. Discover how to implement sophisticated functionality that is not directly supported by the language or platform. After reading Effective Enterprise Java , you will know how to design and implement better, more scalable enterprise-scope Java software systems.

Python Essential Reference

If you're an experienced Ruby programmer, Effective Ruby will help you harness Ruby's full power to write more robust, efficient, maintainable, and well-performing code. Drawing on nearly a decade of Ruby experience, Peter J. Jones brings together 48 Ruby best practices, expert tips, and shortcuts—all supported by realistic code examples. Jones offers practical advice for each major area of Ruby development, from modules to memory to metaprogramming. Throughout, he uncovers little-known idioms, quirks, pitfalls, and intricacies that powerfully impact code behavior and performance. Each item contains specific, actionable, clearly organized guidelines; careful advice; detailed technical arguments; and illuminating code examples. When multiple options exist, Jones shows you how to choose the one that will work best in your situation. Effective Ruby will help you systematically improve your code—not by blindly following rules, but by thoroughly understanding Ruby programming techniques. Key features of this concise guide include How to avoid pitfalls associated with Ruby's sometimes surprising idiosyncrasies What you should know about inheritance hierarchies to successfully use Rails (and other large frameworks) How to use misunderstood methods to do amazingly useful things with collections Better ways to use exceptions to improve code reliability Powerful metaprogramming approaches (and techniques to avoid) Practical, efficient testing solutions, including MiniTest Unit and Spec Testing How to reliably manage RubyGem dependencies How to make the most of Ruby's memory management and profiling tools How to improve code efficiency by understanding the Ruby interpreter's internals

Python in Practice

Best practices for designing, coding, and distributing your Python software.

A Primer on Scientific Programming with Python

Winner of the 2014 Jolt Award for "Best Book" "Whether you are an experienced programmer or are starting your career, Python in Practice is full of valuable advice and example to help you improve your craft by thinking about problems from different perspectives, introducing tools, and detailing techniques to create more effective solutions." --Doug Hellmann, Senior Developer, DreamHost If you're an experienced Python programmer, Python in Practice will help you improve the quality, reliability, speed, maintainability, and usability of all your Python programs. Mark Summerfield focuses on four key

themes: design patterns for coding elegance, faster processing through concurrency and compiled Python (Cython), high-level networking, and graphics. He identifies well-proven design patterns that are useful in Python, illuminates them with expert-quality code, and explains why some object-oriented design patterns are irrelevant to Python. He also explodes several counterproductive myths about Python programming--showing, for example, how Python can take full advantage of multicore hardware. All examples, including three complete case studies, have been tested with Python 3.3 (and, where possible, Python 3.2 and 3.1) and crafted to maintain compatibility with future Python 3.x versions. All code has been tested on Linux, and most code has also been tested on OS X and Windows. All code may be downloaded at www.qtrac.eu/pipbook.html. Coverage includes Leveraging Python's most effective creational, structural, and behavioral design patterns Supporting concurrency with Python's multiprocessing, threading, and concurrent.futures modules Avoiding concurrency problems using thread-safe queues and futures rather than fragile locks Simplifying networking with high-level modules, including xmlrpclib and RPyC Accelerating Python code with Cython, C-based Python modules, profiling, and other techniques Creating modern-looking GUI applications with Tkinter Leveraging today's powerful graphics hardware via the OpenGL API using pyglet and PyOpenGL

Physics of Continuous Matter, Second Edition

Become a better, more productive programmer through a series of projects that will help you deeply understand and master each of the design patterns covered. In this book you will learn to write elegant "Pythonic" code to solve common programming problems. You will also experience design thinking, by identifying design patterns that would be helpful given a specific problem or situation. Python is eating the world. In recent years it has become so much more than a mere object-oriented, scripting language. Design patterns help you think of and solve problems in chunks. They help you to stand on the shoulders of the giants who have come before, instead of having to reinvent the wheel. What You Will Learn Craft cleaner code Increase your effectiveness as a programmer Write more Pythonic code Solve bigger problems Discover optimal solutions to common problems, done in a way that is uniquely Pythonic Who This Book Is For Programmers who are comfortable with Python. It is also guide for people who have mastered other programming languages and who want to make the transition to Python.

Python for the Busy Java Developer

If you're among the Python developers put off by asyncio's complexity, it's time to take another look. Asyncio is complicated because it aims to solve problems in concurrent network programming for both framework and end-user developers. The features you need to consider are a small subset of the whole asyncio API, but picking out the right features is the tricky part. That's where this practical book comes in. Veteran Python developer Caleb Hattingh helps you

gain a basic understanding of asyncio's building blocks—enough to get started writing simple event-based programs. You'll learn why asyncio offers a safer alternative to preemptive multitasking (threading) and how this API provides a simple way to support thousands of simultaneous socket connections. Get a critical comparison of asyncio and threading for concurrent network programming Take an asyncio walk-through, including a quickstart guide for hitting the ground looping with event-based programming Learn the difference between asyncio features for end-user developers and those for framework developers Understand asyncio's new async/await language syntax, including coroutines and task and future APIs Get detailed case studies (with code) of some popular asyncio-compatible third-party libraries

Using Asyncio in Python

Presents a collection of tips for programmers on ways to improve programming skills.

Effective TypeScript

Write Truly Great iOS and OS X Code with Objective-C 2.0! Effective Objective-C 2.0 will help you harness all of Objective-C's expressive power to write OS X or iOS code that works superbly well in production environments. Using the concise, scenario-driven style pioneered in Scott Meyers' best-selling Effective C++, Matt Galloway brings together 52 Objective-C best practices, tips, shortcuts, and realistic code examples that are available nowhere else. Through real-world examples, Galloway uncovers little-known Objective-C quirks, pitfalls, and intricacies that powerfully impact code behavior and performance. You'll learn how to choose the most efficient and effective way to accomplish key tasks when multiple options exist, and how to write code that's easier to understand, maintain, and improve. Galloway goes far beyond the core language, helping you integrate and leverage key Foundation framework classes and modern system libraries, such as Grand Central Dispatch. Coverage includes Optimizing interactions and relationships between Objective-C objects Mastering interface and API design: writing classes that feel "right at home" Using protocols and categories to write maintainable, bug-resistant code Avoiding memory leaks that can still occur even with Automatic Reference Counting (ARC) Writing modular, powerful code with Blocks and Grand Central Dispatch Leveraging differences between Objective-C protocols and multiple inheritance in other languages Improving code by more effectively using arrays, dictionaries, and sets Uncovering surprising power in the Cocoa and Cocoa Touch frameworks

Trevor Wye

We're living in a digital world. Most of our global economy is digital and the sheer volume of data is stupendous. It's 2020 and we're living in the future. Data Scientist is one of the hottest job on the market right now. Demand for data science is

huge and will only grow, and it seems like it will grow much faster than the actual number of data scientists. So if you want to make a career change and become a data scientist, now is the time. This book will guide you through the process. From my experience of working with multiple companies as a project manager, a data science consultant or a CTO, I was able to see the process of hiring data scientists and building data science teams. I know what's important to land your first job as a data scientist, what skills you should acquire, what you should show during a job interview.

Data Science Job: How to become a Data Scientist

TypeScript is a typed superset of JavaScript with the potential to solve many of the headaches for which JavaScript is famous. But TypeScript has a learning curve of its own, and understanding how to use it effectively can take time. This book guides you through 62 specific ways to improve your use of TypeScript. Author Dan Vanderkam, a principal software engineer at Sidewalk Labs, shows you how to apply these ideas, following the format popularized by Effective C++ and Effective Java (both from Addison-Wesley). You'll advance from a beginning or intermediate user familiar with the basics to an advanced user who knows how to use the language well. Effective TypeScript is divided into eight chapters: Getting to Know TypeScript TypeScript's Type System Type Inference Type Design Working with any Types Declarations and @types Writing and Running Your Code Migrating to TypeScript

Effective JavaScript

(Music Sales America). Trevor Wye's acclaimed Practice Books for the Flute have now sold over one million copies and proved invaluable to players at every grade. Each book explores individual aspects of flute technique in concise detail. This revised edition features updated diagrams, clearer musical notation and improved overall design. This omnibus edition of all six books in the Practice Book series is invaluable for both amateur and would-be professional players. Together these books form a complete reference guide for players who are looking to overcome technical difficulties, and who are seeking advice on how best to practice.

Effective Computation in Physics

Python's simplicity lets you become productive quickly, but this often means you aren't using everything it has to offer. With this hands-on guide, you'll learn how to write effective, idiomatic Python code by leveraging its best—and possibly most neglected—features. Author Luciano Ramalho takes you through Python's core language features and libraries, and shows you how to make your code shorter, faster, and more readable at the same time. Many experienced programmers try to bend Python to fit patterns they learned from other languages, and never discover Python features outside of their

experience. With this book, those Python programmers will thoroughly learn how to become proficient in Python 3. This book covers: Python data model: understand how special methods are the key to the consistent behavior of objects Data structures: take full advantage of built-in types, and understand the text vs bytes duality in the Unicode age Functions as objects: view Python functions as first-class objects, and understand how this affects popular design patterns Object-oriented idioms: build classes by learning about references, mutability, interfaces, operator overloading, and multiple inheritance Control flow: leverage context managers, generators, coroutines, and concurrency with the concurrent.futures and asyncio packages Metaprogramming: understand how properties, attribute descriptors, class decorators, and metaclasses work

Learning Python Design Patterns

More physicists today are taking on the role of software developer as part of their research, but software development isn't always easy or obvious, even for physicists. This practical book teaches essential software development skills to help you automate and accomplish nearly any aspect of research in a physics-based field. Written by two PhDs in nuclear engineering, this book includes practical examples drawn from a working knowledge of physics concepts. You'll learn how to use the Python programming language to perform everything from collecting and analyzing data to building software and publishing your results. In four parts, this book includes: Getting Started: Jump into Python, the command line, data containers, functions, flow control and logic, and classes and objects Getting It Done: Learn about regular expressions, analysis and visualization, NumPy, storing data in files and HDF5, important data structures in physics, computing in parallel, and deploying software Getting It Right: Build pipelines and software, learn to use local and remote version control, and debug and test your code Getting It Out There: Document your code, process and publish your findings, and collaborate efficiently; dive into software licenses, ownership, and copyright procedures

Effective Ruby

Multiplayer Game Programming

The Hitchhiker's Guide to Python takes the journeyman Pythonista to true expertise. More than any other language, Python was created with the philosophy of simplicity and parsimony. Now 25 years old, Python has become the primary or secondary language (after SQL) for many business users. With popularity comes diversity—and possibly dilution. This guide, collaboratively written by over a hundred members of the Python community, describes best practices currently used by package and application developers. Unlike other books for this audience, The Hitchhiker's Guide is light on reusable code

and heavier on design philosophy, directing the reader to excellent sources that already exist.

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