

## Core Python Programming Wesley J Chun

Core Python Programming Python Cookbook Expert Python Programming Core Python Applications Programming From Mathematics to Generic Programming Gray Hat Python Programming Skills for Data Science Python for Data Analysis Beginning Python Games Development, Second Edition Python Data Science Handbook Programming Pearls Core Python Language Fundamentals Discovering Computer Science Core Python Programming Python for Software Design Data Science from Scratch Wxpython 2.8 Application Development Cookbook Python Fundamentals Core Python Programming Python Web Development with Django Core Python Programming Dive Into Python The Python Apprentice The Advanced Roblox Coding Book: An Unofficial Guide Core Python Programming Advanced Guide to Python 3 Programming Text Processing in Python Python Essential Reference Effective Python Learning Python Python Programming Programming in Python 3 Let Us Python (Second Edition) Think Julia Python for Everybody Introduction to Computation and Programming Using Python Learn Python 3 the Hard Way Python Programming Python in a Nutshell Python Projects

### Core Python Programming

Beginning Python Games Development, Second Edition teaches you how to create compelling games using Python and the PyGame games development library. It will teach you how to create visuals, do event handling, create 3D games, add media elements, and integrate OpenGL into your Python game. In this update to the first ever book to cover the popular open source PyGame games development library, you'll stand to gain valuable technical insights and follow along with the creation of a real-world, freely downloadable video game. Written by industry veterans and Python experts Will McGugan and Harrison Kinsley, this is a comprehensive, practical introduction to games development in Python. You can also capitalize upon numerous tips and tricks the authors have accumulated over their careers creating games for some of the world's largest game developers.

### Python Cookbook

Learn the Python skills and culture you need to become a productive member of any Python project. About This Book Taking a practical approach to studying Python A clear appreciation of the sequence-oriented parts of Python Emphasis on the way in which Python code is structured Learn how to produce bug-free code by using testing tools Who This Book Is For The Python Apprentice is for anyone who wants to start building, creating and contributing towards a Python project. No previous knowledge of Python is required, although at least some familiarity with programming in another language is helpful. What You Will Learn Learn the language of Python itself Get a start on the Python standard library Learn how to

integrate 3rd party libraries Develop libraries on your own Become familiar with the basics of Python testing In Detail Experienced programmers want to know how to enhance their craft and we want to help them start as apprentices with Python. We know that before mastering Python you need to learn the culture and the tools to become a productive member of any Python project. Our goal with this book is to give you a practical and thorough introduction to Python programming, providing you with the insight and technical craftsmanship you need to be a productive member of any Python project. Python is a big language, and it's not our intention with this book to cover everything there is to know. We just want to make sure that you, as the developer, know the tools, basic idioms and of course the ins and outs of the language, the standard library and other modules to be able to jump into most projects. Style and approach We introduce topics gently and then revisit them on multiple occasions to add the depth required to support your progression as a Python developer. We've worked hard to structure the syllabus to avoid forward references. On only a few occasions do we require you to accept techniques on trust, before explaining them later; where we do, it's to deliberately establish good habits.

### **Expert Python Programming**

bull; Demonstrates how Python is the perfect language for text-processing functions. bull; Provides practical pointers and tips that emphasize efficient, flexible, and maintainable approaches to text-processing challenges. bull; Helps programmers develop solutions for dealing with the increasing amounts of data with which we are all inundated.

### **Core Python Applications Programming**

When programmers list their favorite books, Jon Bentley's collection of programming pearls is commonly included among the classics. Just as natural pearls grow from grains of sand that irritate oysters, programming pearls have grown from real problems that have irritated real programmers. With origins beyond solid engineering, in the realm of insight and creativity, Bentley's pearls offer unique and clever solutions to those nagging problems. Illustrated by programs designed as much for fun as for instruction, the book is filled with lucid and witty descriptions of practical programming techniques and fundamental design principles. It is not at all surprising that Programming Pearls has been so highly valued by programmers at every level of experience. In this revision, the first in 14 years, Bentley has substantially updated his essays to reflect current programming methods and environments. In addition, there are three new essays on testing, debugging, and timing set representations string problems All the original programs have been rewritten, and an equal amount of new code has been generated. Implementations of all the programs, in C or C++, are now available on the Web. What remains the same in this new edition is Bentley's focus on the hard core of programming problems and his delivery of workable solutions to those problems. Whether you are new to Bentley's classic or are revisiting his work for some fresh insight, the book is sure to make your own list of favorites.

## From Mathematics to Generic Programming

Portable, powerful, and a breeze to use, Python is the popular open source object-oriented programming language used for both standalone programs and scripting applications. It is now being used by an increasing number of major organizations, including NASA and Google. Updated for Python 2.4, *The Python Cookbook, 2nd Edition* offers a wealth of useful code for all Python programmers, not just advanced practitioners. Like its predecessor, the new edition provides solutions to problems that Python programmers face everyday. It now includes over 200 recipes that range from simple tasks, such as working with dictionaries and list comprehensions, to complex tasks, such as monitoring a network and building a templating system. This revised version also includes new chapters on topics such as time, money, and metaprogramming. Here's a list of additional topics covered: Manipulating text Searching and sorting Working with files and the filesystem Object-oriented programming Dealing with threads and processes System administration Interacting with databases Creating user interfaces Network and web programming Processing XML Distributed programming Debugging and testing Another advantage of *The Python Cookbook, 2nd Edition* is its trio of authors--three well-known Python programming experts, who are highly visible on email lists and in newsgroups, and speak often at Python conferences. With scores of practical examples and pertinent background information, *The Python Cookbook, 2nd Edition* is the one source you need if you're looking to build efficient, flexible, scalable, and well-integrated systems.

## Gray Hat Python

For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the *Python Data Science Handbook* do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you'll learn how to use: IPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

## Programming Skills for Data Science

Demonstrates the programming language's strength as a Web development tool, covering syntax, data types, built-ins, the Python standard module library, and real world examples.

### **Python for Data Analysis**

Python 3 is the best version of the language yet: It is more powerful, convenient, consistent, and expressive than ever before. Now, leading Python programmer Mark Summerfield demonstrates how to write code that takes full advantage of Python 3's features and idioms. The first book written from a completely "Python 3" viewpoint, *Programming in Python 3* brings together all the knowledge you need to write any program, use any standard or third-party Python 3 library, and create new library modules of your own. Summerfield draws on his many years of Python experience to share deep insights into Python 3 development you won't find anywhere else. He begins by illuminating Python's "beautiful heart": the eight key elements of Python you need to write robust, high-performance programs. Building on these core elements, he introduces new topics designed to strengthen your practical expertise—one concept and hands-on example at a time. This book's coverage includes Developing in Python using procedural, object-oriented, and functional programming paradigms Creating custom packages and modules Writing and reading binary, text, and XML files, including optional compression, random access, and text and XML parsing Leveraging advanced data types, collections, control structures, and functions Spreading program workloads across multiple processes and threads Programming SQL databases and key-value DBM files Utilizing Python's regular expression mini-language and module Building usable, efficient, GUI-based applications Advanced programming techniques, including generators, function and class decorators, context managers, descriptors, abstract base classes, metaclasses, and more *Programming in Python 3* serves as both tutorial and language reference, and it is accompanied by extensive downloadable example code—all of it tested with the final version of Python 3 on Windows, Linux, and Mac OS X.

### **Beginning Python Games Development, Second Edition**

*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

### **Python Data Science Handbook**

A guide to completing Python projects for those ready to take their skills to the next level Python Projects is the ultimate resource for the Python programmer with basic skills who is ready to move beyond tutorials and start building projects. The preeminent guide to bridge the gap between learning and doing, this book walks readers through the "where" and "how" of real-world Python programming with practical, actionable instruction. With a focus on real-world functionality, Python Projects details the ways that Python can be used to complete daily tasks and bring efficiency to businesses and individuals alike. Python Projects is written specifically for those who know the Python syntax and lay of the land, but may still be intimidated by larger, more complex projects. The book provides a walk-through of the basic set-up for an application and the building and packaging for a library, and explains in detail the functionalities related to the projects. Topics include: \*How to maximize the power of the standard library modules \*Where to get third party libraries, and the best practices for utilization \*Creating, packaging, and reusing libraries within and across projects \*Building multi-layered functionality including networks, data, and user interfaces \*Setting up development environments and using virtualenv, pip, and more Written by veteran Python trainers, the book is structured for easy navigation and logical progression that makes it ideal for individual, classroom, or corporate training. For Python developers looking to apply their skills to real-world challenges, Python Projects is a goldmine of information and expert insight.

### **Programming Pearls**

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. The Complete Developer's Guide to Python New to Python? The definitive guide.

### **Core Python Language Fundamentals**

Advanced Guide to Python 3 Programming delves deeply into a host of subjects that you need to understand if you are to develop sophisticated real-world programs. Each topic is preceded by an introduction followed by more advanced topics, along with numerous examples, that take you to an advanced level. There are nine different sections within the book covering Computer Graphics (including GUIs), Games, Testing, File Input and Output, Databases Access, Logging, Concurrency and Parallelism, Reactive programming, and Networking. Each section is self-contained and can either be read on its own or as part of the book as a whole. This book is aimed at the those who have learnt the basics of the Python 3 language but want to delve deeper into Python's eco system of additional libraries and modules, to explore concurrency and parallelism, to create impressive looking graphical interfaces, to work with databases and files and to provide professional logging facilities.

### **Discovering Computer Science**

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. The Complete Developer's Guide to Python New to Python? The definitive guide.

### **Core Python Programming**

In this substantive yet accessible book, pioneering software designer Alexander Stepanov and his colleague Daniel Rose illuminate the principles of generic programming and the mathematical concept of abstraction on which it is based, helping you write code that is both simpler and more powerful. If you're a reasonably proficient programmer who can think logically, you have all the background you'll need. Stepanov and Rose introduce the relevant abstract algebra and number theory with exceptional clarity. They carefully explain the problems mathematicians first needed to solve, and then show how these mathematical solutions translate to generic programming and the creation of more effective and elegant code. To demonstrate the crucial role these mathematical principles play in many modern applications, the authors show how to use these results and generalized algorithms to implement a real-world public-key cryptosystem. As you read this book, you'll master the thought processes necessary for effective programming and learn how to generalize narrowly conceived algorithms to widen their usefulness without losing efficiency. You'll also gain deep insight into the value of mathematics to programming—insight that will prove invaluable no matter what programming languages and paradigms you use. You will learn about How to generalize a four thousand-year-old algorithm, demonstrating indispensable lessons about clarity and efficiency Ancient paradoxes, beautiful theorems, and the productive tension between continuous and discrete A simple algorithm for finding greatest common divisor (GCD) and modern abstractions that build on it Powerful mathematical approaches to abstraction How abstract algebra provides the idea at the heart of generic programming Axioms, proofs, theories, and models: using mathematical techniques to organize knowledge about your algorithms and data structures

Surprising subtleties of simple programming tasks and what you can learn from them How practical implementations can exploit theoretical knowledge

## **Python for Software Design**

Using the simple, robust, Python-based Django framework, you can build powerful Web solutions with remarkably few lines of code. In Python Web Development with Django®, three experienced Django and Python developers cover all the techniques, tools, and concepts you need to make the most of Django 1.0, including all the major features of the new release. The authors teach Django through in-depth explanations, plus provide extensive sample code supported with images and line-by-line explanations. You'll discover how Django leverages Python's development speed and flexibility to help you solve a wide spectrum of Web development problems and learn Django best practices covered nowhere else. You'll build your first Django application in just minutes and deepen your real-world skills through start-to-finish application projects including Simple Web log (blog) Online photo gallery Simple content management system Ajax-powered live blogger Online source code sharing/syntax highlighting tool How to run your Django applications on the Google App Engine This complete guide starts by introducing Python, Django, and Web development concepts, then dives into the Django framework, providing a deep understanding of its major components (models, views, templates), and how they come together to form complete Web applications. After a discussion of four independent working Django applications, coverage turns to advanced topics, such as caching, extending the template system, syndication, admin customization, and testing. Valuable reference appendices cover using the command-line, installing and configuring Django, development tools, exploring existing Django applications, the Google App Engine, and how to get more involved with the Django community.

Introduction 1 Part I: Getting Started Chapter 1: Practical Python for Django 7 Chapter 2: Django for the Impatient: Building a Blog 57 Chapter 3: Starting Out 77 Part II: Django in Depth Chapter 4: Defining and Using Models 89 Chapter 5: URLs, HTTP Mechanisms, and Views 117 Chapter 6: Templates and Form Processing 135 Part III: Django Applications by Example Chapter 7: Photo Gallery 159 Chapter 8: Content Management System 181 Chapter 9: Liveblog 205 Chapter 10: Pastebin 221 Part IV: Advanced Django Techniques and Features Chapter 11: Advanced Django Programming 235 Chapter 12: Advanced Django Deployment 261 Part V: Appendices Appendix A: Command Line Basics 285 Appendix B: Installing and Running Django 295 Appendix C: Tools for Practical Django Development 313 Appendix D: Finding, Evaluating, and Using Django Applications 321 Appendix E: Django on the Google App Engine 325 Appendix F: Getting Involved in the Django Project 337 Index 339 Colophon 375

## **Data Science from Scratch**

The Foundational Hands-On Skills You Need to Dive into Data Science “Freeman and Ross have created the definitive

resource for new and aspiring data scientists to learn foundational programming skills.” –From the foreword by Jared Lander, series editor Using data science techniques, you can transform raw data into actionable insights for domains ranging from urban planning to precision medicine. Programming Skills for Data Science brings together all the foundational skills you need to get started, even if you have no programming or data science experience. Leading instructors Michael Freeman and Joel Ross guide you through installing and configuring the tools you need to solve professional-level data science problems, including the widely used R language and Git version-control system. They explain how to wrangle your data into a form where it can be easily used, analyzed, and visualized so others can see the patterns you’ve uncovered. Step by step, you’ll master powerful R programming techniques and troubleshooting skills for probing data in new ways, and at larger scales. Freeman and Ross teach through practical examples and exercises that can be combined into complete data science projects. Everything’s focused on real-world application, so you can quickly start analyzing your own data and getting answers you can act upon. Learn to Install your complete data science environment, including R and RStudio Manage projects efficiently, from version tracking to documentation Host, manage, and collaborate on data science projects with GitHub Master R language fundamentals: syntax, programming concepts, and data structures Load, format, explore, and restructure data for successful analysis Interact with databases and web APIs Master key principles for visualizing data accurately and intuitively Produce engaging, interactive visualizations with ggplot and other R packages Transform analyses into sharable documents and sites with R Markdown Create interactive web data science applications with Shiny Collaborate smoothly as part of a data science team Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

### **Wxpython 2.8 Application Development Cookbook**

A no-nonsense introduction to software design using the Python programming language. Written for people with no programming experience, this book starts with the most basic concepts and gradually adds new material. Some of the ideas students find most challenging, like recursion and object-oriented programming, are divided into a sequence of smaller steps and introduced over the course of several chapters. The focus is on the programming process, with special emphasis on debugging. The book includes a wide range of exercises, from short examples to substantial projects, so that students have ample opportunity to practise each new concept. Exercise solutions and code examples are available from thinkpython.com, along with Swampy, a suite of Python programs that is used in some of the exercises.

### **Python Fundamentals**

For any student or professional interested in learning the fundamentals of Python In this one-of-a-kind video package, leading Python developer and trainer Wesley Chun helps you learn Python quickly and comprehensively, so that you can

immediately succeed with any Python project. Just click and watch: One step at a time, you will master Python fundamentals. If you already have Python experience, these videos will help further develop your skills. The lessons start with an introduction to the core features of the Python language, including syntax basics and standard types and operations. The lessons progress into advanced topics, such as Python's memory model and object-oriented programming. This LiveLessons video course closely mirrors the topics covered in its sister publication, *Core Python Programming, Second Edition* (Prentice Hall, 2007). As in the book, viewers will find review questions and coding exercises at the end of each lesson in the video booklet to test the material introduced in the video and printed parts of the lesson.

### **Core Python Programming**

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

### **Python Web Development with Django**

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

### **Core Python Programming**

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. The Complete Developer's Guide to Python New to Python? The definitive guide.

### **Dive Into Python**

This book is suitable for use in a university-level first course in computing (CS1), as well as the increasingly popular course known as CS0. It is difficult for many students to master basic concepts in computer science and programming. A large portion of the confusion can be blamed on the complexity of the tools and materials that are traditionally used to teach CS1 and CS2. This textbook was written with a single overarching goal: to present the core concepts of computer science as simply as possible without being simplistic.

### **The Python Apprentice**

Python is fast becoming the programming language of choice for hackers, reverse engineers, and software testers because it's easy to write quickly, and it has the low-level support and libraries that make hackers happy. But until now, there has been no real manual on how to use Python for a variety of hacking tasks. You had to dig through forum posts and man pages, endlessly tweaking your own code to get everything working. Not anymore. Gray Hat Python explains the concepts behind hacking tools and techniques like debuggers, trojans, fuzzers, and emulators. But author Justin Seitz goes beyond theory, showing you how to harness existing Python-based security tools—and how to build your own when the pre-built ones won't cut it. You'll learn how to: -Automate tedious reversing and security tasks -Design and program your own debugger -Learn how to fuzz Windows drivers and create powerful fuzzers from scratch -Have fun with code and library injection, soft and hard hooking techniques, and other software trickery -Sniff secure traffic out of an encrypted web browser session -Use PyDBG, Immunity Debugger, Sulley, IDAPython, PyEMU, and more The world's best hackers are using Python to do their handiwork. Shouldn't you?

## **The Advanced Roblox Coding Book: An Unofficial Guide**

Learn Python Quickly, A Programmer-Friendly Guide DESCRIPTION Most Programmer's learning Python are usually comfortable with some or the other programming language and are not interested in going through the typical learning curve of learning the first programming language. Instead, they are looking for something that can get them off the ground quickly. They are looking for similarities and differences in a feature that they have used in other language(s). This book should help them immediately. It guides you from the fundamentals of using module through the use of advanced object orientation. KEY FEATURES Strengthens the foundations, as detailed explanation of programming language concepts are given in simple manner. Lists down all the important points that you need to know related to various topics in an organized manner. Prepares you for coding related interview and theoretical questions. Provides In depth explanation of complex topics and Questions. Focuses on how to think logically to solve a problem. Follows a systematic approach that will help you to prepare for an interview in short duration of time. Exercises are exceptionally useful to complete the reader's understanding of a topic. WHAT WILL YOU LEARN Data types, Control flow instructions, console & File Input/Output Strings, list & tuples, List comprehension Sets & Dictionaries, Functions & Lambdas Dictionary Comprehension Modules, classes and objects, Inheritance Operator overloading, Exception handling Iterators & Generators, Decorators, Command-line Parsing WHO THIS BOOK IS FOR Students, Programmers, researchers, and software developers who wish to learn the basics of Python programming language. Table of Contents 1. Introduction to Python 2. Python Basics 3. Strings 4. Decision Control Instruction 5. Repetition Control Instruction 6. Console Input/Output 7. Lists 8. Tuples 9. Sets 10. Dictionaries 11. Comprehensions 12. Functions 13. Recursion 14. Functional Programming 15. Modules and Packages 16. Namespaces 17. Classes and Objects 18. Intricacies of Classes and Objects 19. Containership and Inheritance 20. Iterators and Generators 21. Exception Handling 22. File Input/Output 23. Miscellany 24. Multi-threading 25. Synchronization

## **Core Python Programming**

Python Programming Complete Crash Course Python Programming For Beginners, Python Programming For Intertmediates, Python Programming For Advanced This Python Programming Bundle includes all 3 books Python Programming For Beginners Python Programming For Intermediates Python Programming For Advanced

## **Advanced Guide to Python 3 Programming**

Over 80 practical recipes for developing feature-rich applications using wxPython

## **Text Processing in Python**

"Havill's problem-driven approach introduces algorithmic concepts in context and motivates students with a wide range of interests and backgrounds." -- Janet Davis, Associate Professor and Microsoft Chair of Computer Science, Whitman College  
"This book looks really great and takes exactly the approach I think should be used for a CS 1 course. I think it really fills a need in the textbook landscape." -- Marie desJardins, Dean of the College of Organizational, Computational, and Information Sciences, Simmons University  
"Discovering Computer Science is a refreshing departure from introductory programming texts, offering students a much more sincere introduction to the breadth and complexity of this ever-growing field." -- James Deverick, Senior Lecturer, The College of William and Mary  
"This unique introduction to the science of computing guides students through broad and universal approaches to problem solving in a variety of contexts and their ultimate implementation as computer programs." -- Daniel Kaplan, DeWitt Wallace Professor, Macalester College  
Discovering Computer Science: Interdisciplinary Problems, Principles, and Python Programming is a problem-oriented introduction to computational problem solving and programming in Python, appropriate for a first course for computer science majors, a more targeted disciplinary computing course or, at a slower pace, any introductory computer science course for a general audience. Realizing that an organization around language features only resonates with a narrow audience, this textbook instead connects programming to students' prior interests using a range of authentic problems from the natural and social sciences and the digital humanities. The presentation begins with an introduction to the problem-solving process, contextualizing programming as an essential component. Then, as the book progresses, each chapter guides students through solutions to increasingly complex problems, using a spiral approach to introduce Python language features. The text also places programming in the context of fundamental computer science principles, such as abstraction, efficiency, testing, and algorithmic techniques, offering glimpses of topics that are traditionally put off until later courses. This book contains 30 well-developed independent projects that encourage students to explore questions across disciplinary boundaries, over 750 homework exercises, and 300 integrated reflection questions engage students in problem solving and active reading. The accompanying website — <https://www.discoveringcs.net> — includes more advanced content, solutions to selected exercises, sample code and data files, and pointers for further exploration.

### **Python Essential Reference**

Demonstrates the programming language's strength as a Web development tool, covering such topics as regular expressions, Django, cloud computing, and Web services, and includes real world examples.

### **Effective Python**

"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].

### **Learning Python**

Python for Everybody is designed to introduce students to programming and software development through the lens of exploring data. You can think of the Python programming language as your tool to solve data problems that are beyond the capability of a spreadsheet. Python is an easy to use and easy to learn programming language that is freely available on Macintosh, Windows, or Linux computers. So once you learn Python you can use it for the rest of your career without needing to purchase any software. This book uses the Python 3 language. The earlier Python 2 version of this book is titled "Python for Informatics: Exploring Information". There are free downloadable electronic copies of this book in various formats and supporting materials for the book at [www.pythonlearn.com](http://www.pythonlearn.com). The course materials are available to you under a Creative Commons License so you can adapt them to teach your own Python course.

### **Python Programming**

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

### **Programming in Python 3**

Presents case studies and instructions on how to solve data analysis problems using Python.

## **Let Us Python (Second Edition)**

The new edition of an introductory text that teaches students the art of computational problem solving, covering topics ranging from simple algorithms to information visualization.

## **Think Julia**

Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they're also a good way to dive into the discipline without actually understanding data science. In this book, you'll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data science, and with hacking skills you need to get started as a data scientist. Today's messy glut of data holds answers to questions no one's even thought to ask. This book provides you with the know-how to dig those answers out. Get a crash course in Python Learn the basics of linear algebra, statistics, and probability—and understand how and when they're used in data science Collect, explore, clean, munge, and manipulate data Dive into the fundamentals of machine learning Implement models such as k-nearest Neighbors, Naive Bayes, linear and logistic regression, decision trees, neural networks, and clustering Explore recommender systems, natural language processing, network analysis, MapReduce, and databases

## **Python for Everybody**

Demonstrates the programming language's strength as a Web development tool, covering syntax, data types, built-ins, the Python standard module library, and real world examples.

## **Introduction to Computation and Programming Using Python**

Clear and easy-to follow instructions for using coding and scripting tools to create new, more advanced Roblox games. Take your game design to the next level, with this complete guide to Roblox coding and scripting! Learn how to code using the programming language Lua to create new objects and games in the Roblox world: from teleporting objects (or PCs/NPCs!), to adding and applying power ups, to creating a leaderboard, and allowing players to save their games. This book walks you through the basics of the studio tool, provides tutorials for specific actions and creations, then explains how to use all of that knowledge to create your own unique game world! With detailed instructions, example screenshots, and simple explanations of what code to use and how to use it, this book is a must-have guide for any Roblox game designer—from

beginners to expert coders!

## **Learn Python 3 the Hard Way**

### **Python Programming**

If you're just learning how to program, Julia is an excellent JIT-compiled, dynamically typed language with a clean syntax. This hands-on guide uses Julia 1.0 to walk you through programming one step at a time, beginning with basic programming concepts before moving on to more advanced capabilities, such as creating new types and multiple dispatch. Designed from the beginning for high performance, Julia is a general-purpose language ideal for not only numerical analysis and computational science but also web programming and scripting. Through exercises in each chapter, you'll try out programming concepts as you learn them. Think Julia is perfect for students at the high school or college level as well as self-learners and professionals who need to learn programming basics. Start with the basics, including language syntax and semantics Get a clear definition of each programming concept Learn about values, variables, statements, functions, and data structures in a logical progression Discover how to work with files and databases Understand types, methods, and multiple dispatch Use debugging techniques to fix syntax, runtime, and semantic errors Explore interface design and data structures through case studies

### **Python in a Nutshell**

\* Quick start to learning python—very example oriented approach \* Book has its own Web site established by the author: <http://diveintopython.org/> Author is well known in the Open Source community and the book has a unique quick approach to learning an object oriented language.

### **Python Projects**

Praise for Core Python Programming The Complete Developer's Guide to Python New to Python? The definitive guide to Python development for experienced programmers Covers core language features thoroughly, including those found in the latest Python releases—learn more than just the syntax! Learn advanced topics such as regular expressions, networking, multithreading, GUI, Web/CGI, and Python extensions Includes brand-new material on databases, Internet clients, Java/Jython, and Microsoft Office, plus Python 2.6 and 3 Presents hundreds of code snippets, interactive examples, and practical exercises to strengthen your Python skills Python is an agile, robust, expressive, fully object-oriented, extensible,

and scalable programming language. It combines the power of compiled languages with the simplicity and rapid development of scripting languages. In *Core Python Programming, Second Edition*, leading Python developer and trainer Wesley Chun helps you learn Python quickly and comprehensively so that you can immediately succeed with any Python project. Using practical code examples, Chun introduces all the fundamentals of Python programming: syntax, objects and memory management, data types, operators, files and I/O, functions, generators, error handling and exceptions, loops, iterators, functional programming, object-oriented programming and more. After you learn the core fundamentals of Python, he shows you what you can do with your new skills, delving into advanced topics, such as regular expressions, networking programming with sockets, multithreading, GUI development, Web/CGI programming and extending Python in C. This edition reflects major enhancements in the Python 2.x series, including 2.6 and tips for migrating to 3. It contains new chapters on database and Internet client programming, plus coverage of many new topics, including new-style classes, Java and Jython, Microsoft Office (Win32 COM Client) programming, and much more. Learn professional Python style, best practices, and good programming habits Gain a deep understanding of Python's objects and memory model as well as its OOP features, including those found in Python's new-style classes Build more effective Web, CGI, Internet, and network and other client/server applications Learn how to develop your own GUI applications using Tkinter and other toolkits available for Python Improve the performance of your Python applications by writing extensions in C and other languages, or enhance I/O-bound applications by using multithreading Learn about Python's database API and how to use a variety of database systems with Python, including MySQL, Postgres, and SQLite Features appendices on Python 2.6 & 3, including tips on migrating to the next generation!

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