

Introduction To Programming In Python An Interdisciplinary Approach

Thorsten and Isaac have written this book based on a programming course we teach for Master’s Students at the School of Computer Science of the University of Nottingham. The book is intended for students with little or no background in programming coming from different backgrounds educationally as well as culturally. It is not mainly a Python course but we use Python as a vehicle to teach basic programming concepts. Hence, the words conceptual programming in the title. We cover basic concepts about data structures, imperative programming, recursion and backtracking, object-oriented programming, functional programming, game development and some basics of data science.

The current text provides a clear introduction to Computer Science concepts in a programming environment. It is designed as suitable use in freshman- or introductory level coursework in CS and provides the fundamental concepts as well as abstract theorems for solving computational problems. The Python language serves as a medium for illustrating and demonstrating the concepts.

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. This book introduces students with little or no prior programming experience to the art of computational problem solving using Python and various Python libraries, including PyLab. It provides students with skills that will enable them to make productive use of computational techniques, including some of the tools and techniques of data science for using computation to model and interpret data. The book is based on an MIT course (which became the most popular course offered through MIT’s OpenCourseWare) and was developed for use not only in a conventional classroom but in in a massive open online course (MOOC). This new edition has been updated for Python 3, reorganized to make it easier to use for courses that cover only a subset of the material, and offers additional material including five new chapters. Students are introduced to Python and the basics of programming in the context of such computational concepts and techniques as exhaustive enumeration, bisection search, and efficient approximation algorithms. Although it covers such traditional topics as computational complexity and simple algorithms, the book focuses on a wide range of topics not found in most introductory texts, including information visualization, simulations to model randomness, computational techniques to understand data, and statistical techniques that inform (and misinform) as well as two related but relatively advanced topics: optimization problems and dynamic programming. This edition offers expanded material on statistics and machine learning and new chapters on Frequentist and Bayesian statistics.

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python’s elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms. The Python interpreter and the extensive standard library are freely available in source or binary form for all major platforms from the Python Web site, <https://www.python.org/>, and may be freely distributed. The same site also contains distributions of and pointers to many free third party Python modules, programs and tools, and additional documentation. The Python interpreter is easily extended with new functions and data types implemented in C or C++ (or other languages callable from C). Python is also suitable as an extension language for customizable applications. This tutorial introduces the reader informally to the basic concepts and features of the python language and system. It helps to have a Python interpreter handy for hands-on experience, but all examples are self contained, so the tutorial can be read off-line as well. For a description of standard objects and modules, see [library-index](#). [reference-index](#) gives a more formal de?nition of the language. To write extensions in C or C++, read [extending-index](#) and [c-api-index](#). There are also several books covering Python in depth. This tutorial does not attempt to be comprehensive and cover every single feature, or even every commonly used feature. Instead, it introduces many of Python’s most noteworthy features, and will give you a good idea of the language’s ?avor and style. After reading it, you will be able to read and write Python modules and programs, and you will be ready to learn more about the various Python library modules described in [library-index](#). The Glossary is also worth going through.

Programming in Python 3

An Introduction to Computer Science Using Python 3.6

Introduction to Computation and Programming Using Python, second edition

An Introduction to Programming Using Python

Learning Python

An Introduction to the Python Computer Language and Computer Programming

Practical Python 3 for experienced developers: use the right idioms, techniques, and features to write great code * *Written from a completely 'Python 3' point of view: teaches best practices for making the most of today’s newest version of Python. *Designed to help developers get productive fast... then learn how to write any program, use any library, create any library module. *Includes expert guidance on migrating Python 2 code to Python 3. Around the world, programmers appreciate Python for its simplicity, power, expressiveness, and the sheer pleasure of writing Python code. Python 3.1 is the newest and best version of the language yet: more convenient, more consistent, and easier to use. Mark Summerfield demonstrates how to write code that takes full advantage of the latest Python 3 features and idioms. Programming in Python 3, 2/e, brings together all the knowledge needed to write programs, use any library, and even create new library modules. The book teaches every aspect of the Python 3 language. It covers all the built-in functionality, as well as key components of Python’s standard library. Structured so readers can write Python programs from chapter 1, each subsequent chapter provides further depth and broader coverage. Two new chapters have been added to this edition increasing the coverage to include parsing, debugging, testing, and profiling. Readers will master Python procedural and object-oriented techniques; creation of custom modules and packages; writing and reading files; multithreading; networking; database programming; GUIs; regular expressions; application debugging, testing, and profiling; and more. Detailed appendices include coverage of migrating applications from Python 2 to Python 3, plus a complete language reference. All sample code has been tested with the final version of Python 3 on Windows, Linux, and Mac OS X.

"In MTA 98-381: Introduction to Programming Using Python LiveLessons, you learn the fundamentals of writing syntactically correct Python code to solve real-world programming problems. You also gain hands-on experience to prepare for Microsoft MTA exam 98-383. Python programming all the way to troubleshooting, error handling, and beyond. One step at a time, you learn how to perform Python assignments, decipher Boolean and numeric data types, construct Python strings, perform indexing and slicing string operations, perform input and output operations, manage flow with decisions and loops, write to a text file, handle exceptions, and import and use Python packages. Throughout, Brian covers the MTA exam 98-381 objective domains logically and provides opportunities to review and practice fundamental concepts and techniques. Topics are organized into bite-sized, self-contained lessons, so you can learn key Python skills quickly and easily. This video course, along with additional study, can help you achieve the hours of instruction and hands-on experience recommended to take the exam and demonstrate your mastery of fundamental Python concepts."--Resource description page.

Suitable for newcomers to computer science, A Concise Introduction to Programming in Python provides a succinct, yet complete, first course in computer science using the Python programming language. The book features: Short, modular chapters with brief and precise explanations, intended for one class period Early introduction of basic procedural constructs such as functions, selection, and repetition, allowing them to be used throughout the course Objects are introduced in the middle of the course, and class design comes toward the end Examples, exercises, and projects from a wide range of application domains, including biology, physics, images, sound, mathematics, games, and textual analysis No external libraries are required, simplifying the book ’ s use in common lab spaces Each chapter introduces a main idea through a concrete example and a series of exercises. Designed to teach programming in a concise, yet comprehensive way, this book provides a timely introduction for students and anyone interested in learning Python.

If you don’t know the programming, if you don’t want to waste time and you want methods that Guarantee Results Immediately, then this is the perfect book for you. You FINALLY have the book "Python"! Code is the language of the future. The secret is in learning programming languages because every electronic device runs on some sort of programming language. If for whatever reason, you have been looking to learn programming or perhaps looking to improve your programming skills, Python could be the best option you can get right now. Python is a programming language that is well-known for its simplicity and powerful features that can be used to make web and software applications. This book is also suitable for those seeking to go beyond the basics of Python programming. What this book offers: - A Practical Introduction Guide to Learn Python. Learn Coding Faster with Hands-On Project. Crash Course - The advanced guide to learn python step by step Why is this book different? Because The best way to learn Python is by doing. This book includes practical and complete exercises that requires the application of all the concepts taught previously. Get your copy of this INCREDIBLE book and start programming. Discover the Secrets of Python. Scroll to the top of the page and select the BUY NOW button.

A Practical Introduction to Python 3

Intro to Python for Computer Science and Data Science: Learning to Program with AI, Big Data and The Cloud, eBook, Global Edition

Python

Practical Programming for Total Beginners

Computer Science

Python Basics

BUY THE PAPER VERSION TO GET THE KINDLE FOR FREEBOOK 1: Do you want to learn Python for data analysis using NumPy, Pandas, and IPython ?You don't know how to begin?You don't need a boring and expensive textbook. This book is the best one for every readers.Grap your copy now!!Why this book?There are several reasons: The author has explored everything about python for data analysis using pandas, NumPy, Ipython and Matplotlib libraries from the basics.A simple language has been used.Many examples have been given, both theoretically and programmatically.Screenshots showing program outputs have been added.The book is written step-by-step for beginners.BOOK 2Do you know all the good reasons to learn Python?It's really usefullt's an official Google programming languageIt works on the three major operating systemsIt is being used more widely in academics as well as the business worldThe easy-to-read language makes it simple to learnGiven all of the benefits of learning Python, why have you put off learning this program? Is it because you thought you didn't have the time?If you're not a total programming newbie but you don't know Python, Python Crash Course can get you up to speed quickly with this important program. The many topics covered include: Variable, datatype, data inputString manipulationConditional logicError handlingDebugging and loggingData structure and algorithmGUI programmingLearning Python can help advance your education or career. Don't use the excuse of lack of time. If you are ready to put a Python in your programming toolbox, grap your book now !

A Concise Introduction to Programming in Python, Second Edition provides a hands-on and accessible introduction to writing software in Python, with no prior programming experience required. The Second Edition was thoroughly reorganized and rewritten based on classroom experience to incorporate: A spiral approach, starting with turtle graphics, and then revisiting concepts in greater depth using numeric, textual, and image data Clear, concise explanations written for beginning students, emphasizing core principles A variety of accessible examples, focusing on key concepts Diagrams to help visualize new concepts New sections on recursion and exception handling, as well as an earlier introduction of lists, based on instructor feedback The text offers sections designed for approximately one class period each, and proceeds gradually from procedural to object-oriented design. Examples, exercises, and projects are included from diverse application domains, including finance, biology, image processing, and textual analysis. It also includes a brief "How-To" sections that introduce optional topics students may be interested in exploring. The text is written to be read, making it a good fit in flipped classrooms. Designed for either classroom use or self-study, all example programs and solutions to odd-numbered exercises (except for projects) are available at: <http://www.central.edu/go/conciseintro/>.

A groundbreaking, flexible approach to computer science anddata science The Deitel’s Introduction to Python for ComputerScience and Data Science: Learning to Program with AI, Big Data and the Cloudoffers a unique approach to teaching introductory Python programming,appropriate for both computer-science and data-science audiences. Providing themost current coverage of topics and applications, the book is paired withextensive traditional supplements as well as Jupyter Notebooks supplements.Real-world datasets and artificial-intelligence technologies allow students towork on projects making a difference in business, industry, government andacademia. Hundreds of examples, exercises, projects (EEPs) and implementationcase studies give students an engaging, challenging and entertainingintroduction to Python programming and hands-on data science. The book’s modular architecture enables instructors toconveniently adapt the text to a wide range of computer-science anddata-science courses offered to audiences drawn from many majors.Computer-science instructors can integrate as much or as little data-scienceand artificial-intelligence topics as they’d like, and data-science instructorscan integrate as much or as little Python as they’d like. The book aligns withthe latest ACM/IEEE CS-and-related computing curriculum initiatives and withthe Data Science Undergraduate Curriculum Proposal sponsored by the NationalScience Foundation.

Named a Notable Book in the 21st Annual Best of Computing list by the ACM! Robert Sedgewick and Kevin Wayne’s Computer Science: An Interdisciplinary Approach is the ideal modern introduction to computer science with Java programming for both students and professionals. Taking a broad, applications-based approach, Sedgewick and Wayne teach through important examples from science, mathematics, engineering, finance, and commercial computing. The book demystifies computation, explains its intellectual underpinnings, and covers the essential elements of programming and computational problem solving in today’s environments. The authors begin by introducing basic programming elements such as variables, conditionals, loops, arrays, and I/O. Next, they turn to functions, introducing key modular programming concepts, including components and reuse. They present a modern introduction to object-oriented programming, covering current programming paradigms and approaches to data abstraction. Building on this foundation, Sedgewick and Wayne widen their focus to the broader discipline of computer science. They introduce classical sorting and searching algorithms, fundamental data structures and their application, and scientific techniques for assessing an implementation’s performance. Using abstract models, readers learn to answer basic questions about computation, gaining insight for practical application. Finally, the authors show how machine architecture links the theory of computing to real computers, and to the field’s history and evolution. For each concept, the authors present all the information readers need to build confidence, together with examples that solve intriguing problems. Each chapter contains question-and-answer sections, self-study drills, and challenging problems that demand creative solutions. Companion web site ([introcs.cs.princeton.edu/java/](http://introcs.princeton.edu/java/)) contains Extensive supplementary information, including suggested approaches to programming assignments, checklists, and FAQs Graphics and sound libraries Links to program code and test data Solutions to selected exercises Chapter summaries Detailed instructions for installing a Java programming environment Detailed problem sets and projects Companion 20-part series of video lectures is available at informit.com/title/9780134493831

Introduction to Scientific Programming with Python

Conceptual Programming with Python

Learning Music with Code

Python Coding

Python for Everybody

Python for Kids

NOTE: You are purchasing a standalone product: MyProgrammingLab does not come packaged with this content. If you would like to purchase both the physical text and MyProgrammingLab search for ISBN-10: 0133050556/ISBN-13: 9780133050554. That package includes ISBN-10: 0132747189/ISBN-13: 9780132747189 and ISBN-10: 0 MyProgrammingLab should only be purchased when required by an instructor. Introduction to Programming Using Python is intended for use in the introduction to programming course. Daniel Liang is known for his "fundamentals-first" approach to teaching programming concepts and techniques. "Fundamentals-first" means that students learn selection statements, loops, and functions, before moving into defining classes. Students learn basic logic and programming concepts before moving into object-oriented programming, and GUI programming. Another aspect of Introduction to Programming Using Python is that in addition to the typical programming examples that feature game early in the chapter that uses a simple graphic to engage the students. Rather than asking them to average 10 numbers together, they learn the concepts in the context of a fun example that generates something visually interesting. Using the graphics examples is optional in this textbook. Turtle graphics can be used in Chapters 1-5 to illustrate how they can be used for developing comprehensive graphical user interfaces and for learning object-oriented programming.

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 can be used on almost any computer. 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 at 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.

Introduce children to the popular Python programming language through relatable examples and fun projects! Python has now surpassed Java as the most commonly used programming language. As the language rises in popularity, this complete guide can teach basic Python concepts to kids with its simple, friendly format. Bite-Size Python children with a foundation in the Python language. This unique book shares knowledge through easy-to-understand examples, fast exercises, and fun projects! As children learn, their parents, caregivers, and instructors can also join in their discoveries. Bite-Size Python is ideal for those who are new to programming, giving kids ages 9 and up important programming languages. Gives an overview of Python Provides exciting programming projects Offers instruction on how to download and install Python Presents key programming language concepts Simplifies technical definitions With this playful guide to learning Python, readers can try out activities on their computers for a ha Python represents children of various backgrounds, so any child who picks up this book will be empowered to learn and young readers will love showing their projects to friends and family!

Introduction to Programming in PythonAn Interdisciplinary ApproachAddison-Wesley Professional

Python Programming

An Introduction to Neural Networks and a Brief Overview of the Processes You Need to Know when Programming Computers and Coding with Python

Release 3. 6. 6rc1

Practical Programming

Python Tutorial

Introduction to Programming in 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 Introduction to Python Programming is written for students who are beginners in the field of computer programming. This book presents an intuitive approach to the concepts of Python Programming for students. This book differs from traditional texts not only in its philosophy but also in its overall focus, level of activities, development of topics, and attention to programming details. The contents of the book are chosen with utmost care after analyzing the syllabus for Python course prescribed by various top universities in USA, Europe, and Asia. Since the prerequisite know-how varies significantly from student to student, the book's overall overture addresses the challenges of teaching and learning of students which is fine-tuned by the authors' experience with large sections of students. This book uses natural language expressions instead of the traditional shortened words of the programming world. This book has been written with the goal to provide students with a textbook that can be easily understood and to make a connection between what students are learning and how they may apply that knowledge. Features of this book This book does not assume any previous programming experience, although of course, any exposure to other programming languages is useful This book introduces all of the key concepts of Python programming language with helpful illustrations Programming examples are presented in a clear and consistent manner Each line of code is numbered and explained in detail Use of f-strings throughout the book Hundreds of real-world examples are included and they come from fields such as entertainment, sports, music and environmental studies Students can periodically check their progress with in-chapter quizzes that appear in all chapters

python codingWandering how to learn everything on Python Programming right from the beginning? The next few lines can tell you something! Learning Python is one of the 21st century specialties you can have right now. You know how to code with Python, you become one of the most relevant citizens of the computer age. You can access neural networks, interpret, understand, code and decode certain special languages of a computer. So in order to be relevant, you need a program like python. And what is Python? Python is a specialized computer program that is used to code data into a computer. It supplies information into the computer in a specialized language. The computer then works on that information to produce desired response. This is exactly what is called Coding. So, Python is a very famous program used to code a computer. It can be used to perform various activities, ranging from basic mathematical calculations to website coding and data processing. Also computing an A. I. software. This field used to be restricted to Computer scientists, Engineers, Technicians and related fields originally. But today, everyone programs a computer and you can't afford not belonging to that class for long. Learning Python programming is your pathway to understanding neural networks and coding information into a computer. But learning the basic coding processes requires a lot of technicalities. That's something most trained specialists in the field find difficult to teach others, probably because it is hard to go to the basics if you are already an expert in the more complex fields. You should remember it is a very creative field too. It's a field where you can become so creative you'd code a complex program that would look mysterious to even the head of coding specialists. But remember, that is only if you understand the basic programming lessons itself. Since even specialists find it difficult to teach newbies, how can you learn? It is not difficult. Do you understand every lesson mentioned on programming so far? Then you will find it very easy, interactive and fascinating to learn python programming if you download: DOWNLOAD: python coding. Python coding is an introduction to neural networks and a brief overview of the processes that you need to know when programming computers and coding with python. It is a detailed book that introduced you to the techniques of python programming in a simple way. At your own pace, understand the basics of python programming. Click here to download your copy.This eBook is one sure bet to learn the complex lessons of coding without getting bored with technicalities. You probably won't finish it before the urge to yank off everything else and jump straight at your computer, coding with compassion. What specialties do you stand to learn?-Introduction to python machine.-The process of neural networks and a brief overview-Learn coding with python in computer programming-Organize data using effective pre-processing techniques-Get grips to a deeper textual and social media data-To optimize your machine learning systems and algorithms.You even get to learn how to organize data using various techniques. C'mon you can't afford not to have a copy. Be sure you scroll up and use the Download button!

Python is a powerful, expressive programming language that's easy to learn and fun to use! But books about learning to program in Python can be kind of dull, gray, and boring, and that's no fun for anyone. Python for Kids brings Python to life and brings you (and your parents) into the world of programming. The ever-patient Jason R. Briggs will guide you through the basics as you experiment with unique (and often hilarious) example programs that feature ravenous monsters, secret agents, thieving ravens, and more. New terms are defined; code is colored, dissected, and explained; and quirky, full-color illustrations keep things on the lighter side. Chapters end with programming puzzles designed to stretch your brain and strengthen your understanding. By the end of the book you'll have programmed two complete games: a clone of the famous Pong and "Mr. Stick Man Races for the Exit"—a platform game with jumps, animation, and much more. As you strike out on your programming adventure, you'll learn how to: -Use fundamental data structures like lists, tuples, and maps -Organize and reuse your code with functions and modules -Use control structures like loops and conditional statements -Draw shapes and patterns with Python's turtle module -Create games, animations, and other graphical wonders with kinter Why should serious adults have all the fun? Python for Kids is your ticket into the amazing world of computer programming. For kids ages 10+ (and their parents) The code in this book runs on almost anything: Windows, Mac, Linux, even an OLPC laptop or Raspberry Pi!

Exploring Data in Python 3

Programming for Computations - Python

Automate the Boring Stuff with Python, 2nd Edition

Python Programming for Beginners

"A Byte of Python" Is a Free Book on Programming Using the Python Language. If All You Know about Computers Is How to Save Text Files, Then This Is the Book for You.

MTA 98-381

The second edition of the best-selling Python book in the world (over 1 million copies sold!). A fast-paced, no-nonsense guide to programming in Python. Updated and thoroughly revised to reflect the latest in Python code and practices. Python Crash Course is the world's best-selling guide to the Python programming language. This fast-paced, thorough introduction to programming with Python will have you writing programs, solving problems, and making things that work in no time. In the first half of the book, you'll learn basic programming concepts, such as variables, lists, classes, and loops, and practice writing clean code with exercises for each topic. You'll also learn how to make your programs interactive and test your code safely before adding it to a project. In the second half, you'll put your new knowledge into practice with three substantial projects: a Space Invaders-inspired arcade game, a set of data visualizations with Python's handy libraries, and a simple web app you can deploy online. As you work through the book, you'll learn how to: • Use powerful Python libraries and tools, including Pygame, Matplotlib, Plotly, and Django • Make 2D games that respond to keypresses and mouse clicks, and that increase in difficulty • Use data to generate interactive visualizations • Create and customize web apps and deploy them safely online • Deal with mistakes and errors so you can solve your own programming problems If you've been thinking about digging into programming, Python Crash Course will get you writing real programs fast. Why wait any longer? Start your engines and code!

Python Programming for Beginners doesn't make any assumptions about your background or knowledge of Python or computer programming. You need no prior knowledge to benefit from this book. You will be guided step by step using a logical and systematic approach. As new concepts, commands, or jargon are encountered they are explained in plain language, making it easy for anyone to understand.--Publisher's description.

Make the Leap From Beginner to Intermediate in Python... Python Basics: A Practical Introduction to Python 3 Your Complete Python Curriculum-With Exercises, Interactive Quizzes, and Sample Projects What should you learn about Python in the beginning to get a strong foundation? With Python Basics, you'll not only cover the core concepts you really need to know, but you'll also learn them in the most efficient order with the help of practical exercises and interactive quizzes. You'll know enough to be dangerous with Python, fast! Who Should Read This Book If you're new to Python, you'll get a practical, step-by-step roadmap on developing your foundational skills. You'll be introduced to each concept and language feature in a logical order. Every step in this curriculum is explained and illustrated with short, clear code samples. Our goal with this book is to educate, not to impress or intimidate. If you're familiar with some basic programming concepts, you'll get a clear and well-tested introduction to Python. This is a practical introduction to Python that jumps right into the meat and potatoes without sacrificing substance. If you have prior experience with languages like VBA, PowerShell, R, Perl, C, C++, C#, Java, or Swift the numerous exercises within each chapter will fast-track your progress. If you're a seasoned developer, you'll get a Python 3 crash course that brings you up to speed with modern Python programming. Mix and match the chapters that interest you the most and use the interactive quizzes and review exercises to check your learning progress as you go along. If you're a self-starter completely new to coding, you'll get practical and motivating examples. You'll begin by installing Python and setting up a coding environment on your computer from scratch, and then continue from there. We'll get you coding right away so that you become competent and knowledgeable enough to solve real-world problems, fast. Develop a passion for programming by solving interesting problems with Python every day! If you're looking to break into a coding or data-science career, you'll pick up the practical foundations with this book. We won't just dump a boat load of theoretical information on you so you can "sink or swim"-instead you'll learn from hands-on, practical examples one step at a time. Each concept is broken down for you so you'll always know what you can do with it in practical terms. If you're interested in teaching others "how to Python," this will be your guidebook. If you're looking to stoke the coding flame in your coworkers, kids, or relatives-use our material to teach them. All the sequencing has been done for you so you'll always know what to cover next and how to explain it. What Python Developers Say About The Book: "Go forth and learn this amazing language using this great book." - Michael Kennedy, Talk Python "The wording is casual, easy to understand, and makes the information flow well." - Thomas Wong, Pythonista "I floundered for a long time trying to teach myself. I slogged through dozens of incomplete online tutorials. I snoozed through hours of boring screencasts. I gave up on countless cruffy books from big-time publishers. And then I found Real Python. The easy-to-follow, step-by-step instructions break the big concepts down into bite-sized chunks written in plain English. The authors never forget their audience and are consistently thorough and detailed in their explanations. I'm up and running now, but I constantly refer to the material for guidance." - Jared Nielsen, Pythonista

The programming language Python was conceived in the late 1980s, [1] and its implementation was started in December 1989[2] by Guido van Rossum at CWI in the Netherlands as a successor to the ABC (programming language) capable of exception handling and interfacing with the Amoeba operating system.[3] Van Rossum is Python's principal author, and his continuing central role in deciding the direction of Python is reflected in the title given to him by the Python community, Benevolent Dictator for Life (BDFL).[4][5] Python was named for the BBC TV show Monty Python's Flying Circus.[6] Python 2.0 was released on October 16, 2000, with many major new features, including a cycle-detecting garbage collector (in addition to reference counting) for memory management and support for Unicode. However, the most important change was to the development process itself, with a shift to a more transparent and community-backed process.[7] Python 3.0, a major, backwards-incompatible release, was released on December 3, 2008[8] after a long period of testing. Many of its major features have also been backported to the backwards-compatible Python 2.6 and 2.7.[9] In February 1991, van Rossum published the code (labeled version 0.9.0) to alt.sources.[10] Already present at this stage in development were classes with inheritance, exception handling, functions, and the core datatypes of list, dict, str and so on. Also in this initial release was a module system borrowed from Modula-3; Van Rossum describes the module as "one of Python's major programming units." [1] Python's exception model also resembles Modula-3's, with the addition of an else clause.[3] In 1994 comp.lang.python, the primary discussion forum for Python, was formed, marking a milestone in the growth of Python's userbase.[1] Python reached version 1.0 in January 1994. The major new features included in this release were the functional programming tools lambda, map, filter and reduce. Van Rossum stated that "Python acquired lambda, reduce(), filter() and map(), courtesy of a Lisp hacker who missed them and submitted working patches." [11] The last version released while Van Rossum was at CWI was Python 1.2. In 1995, Van Rossum continued his work on Python at the Corporation for National Research Initiatives (CNRI) in Reston, Virginia whence he released several versions. By version 1.4, Python had acquired several new features. Notable among these are the Modula-3 inspired keyword arguments (which are also similar to Common Lisp's keyword arguments) and built-in support for complex numbers. Also included is a basic form of data hiding by name mangling, though this is easily bypassed.[12] During Van Rossum's stay at CNRI, he launched the Computer Programming for Everybody (CP4E) initiative, intending to make programming more accessible to more people, with a basic "literacy" in programming languages, similar to the basic English literacy and mathematics skills required by most employers. Python served a central role in this: because of its focus on clean syntax, it was already suitable, and CP4E's goals bore similarities to its predecessor, ABC. The project was funded by DARPA.[13] As of 2007, the CP4E project is inactive, and while Python attempts to be easily learnable and not too arcane in its syntax and semantics, reaching out to non-programmers is not an active concern.[14] Here are what people are saying about the book: This is the best beginner's tutorial I've ever seen! Thank you for your effort. -- Walt Michalik The best thing i found was "A Byte of Python," which is simply a brilliant book for a beginner. It's well written, the concepts are well explained with self evident examples. -- Joshua Robin Excellent gentle introduction to programming #Python for beginners -- Shan Rajasekaran Best newbie guide to python -- Nickson Kaigi start to love python with every single page read -- Heribert Feul perfect beginners guide for python, will give u key to unlock magical world of python

A Concise Introduction to Programming in Python

Introduction to Python Programming for Business and Social Science Applications

An Introduction to Programming Using Python, Global Edition

A Playful Introduction To Programming

A Byte of Python

This book is an introduction to programming concepts that uses Python 3 as the target language. It follows a practical just-in-time presentation – material is given to the student when it is needed. Many examples will be based on games, because Python has become the language of choice for basic game development. Designed as a Year One textbook for introduction to programming classes or for the hobbyist who wants to learn the fundamentals of programming, the text assumes no programming experience. Features: * Introduces programming concepts that use Python 3 * Includes many examples based on video game development * 4-color throughout with game demos on the companion files

&>NOTE: You are purchasing a standalone product: MyProgrammingLab does not come packaged with this content. If you would like to purchase both the physical text and MyProgrammingLab search for ISBN-10: 0134089456/ISBN-13: 9780134089454. That package includes ISBN-10: 0134058437/ISBN-13: 9780134058436 and ISBN-10: 0134058224/ISBN-13: 9780134058221. "For college-level Computer Science courses in Python" Basic Programming and Problem Solving in PythonAs one of the most widely used programming languages in the software industry, Python is desirable to both learn and teach. "Introduction to Programming Using Python" is designed for students eager to learn about the world of programming. Applicable to a range of skill levels, this First Edition textbook provides students with the tools to harness the powerful syntax of Python and understand how to develop computer programs. The compactly written text leverages highly focused chapters, diving deep into the most significant topics to give students an in-depth (rather than superficial) understanding of the language. Using real-world examples and data, the author illustrates practical usage of Python in a way to which students can relate. The text itself is readable, organized, and informative, discussing main points of each topic first and then addressing the peripheral details. Students learn good programming habits the first time-bringing them in line with the best modern programming practices.

The second edition of this best-selling Python book (over 500,000 copies sold!) uses Python 3 to teach even the technically uninclined how to write programs that do in minutes what would take hours to do by hand. There is no prior programming experience required and the book is loved by liberal arts majors and geeks alike. If you've ever spent hours renaming files or updating hundreds of spreadsheet cells, you know how tedious tasks like these can be. But what if you could have your computer do them for you? In this fully revised second edition of the best-selling classic Automate the Boring Stuff with Python, you'll learn how to use Python to write programs that do in minutes what would take you hours to do by hand--no prior programming experience required. You'll learn the basics of Python and explore Python's rich library of modules for performing specific tasks, like scraping data off websites, reading PDF and Word documents, and automating clicking and typing tasks. The second edition of this international fan favorite includes a brand-new chapter on input validation, as well as tutorials on automating Gmail and Google Sheets, plus tips on automatically updating CSV files. You'll learn how to create programs that effortlessly perform useful feats of automation to: • Search for text in a file or across multiple files • Create, update, move, and rename files and folders • Search the Web and download online content • Update and format data in Excel spreadsheets of any size • Split, merge, watermark, and encrypt PDFs • Send email responses and text notifications • Fill out online forms Step-by-step instructions walk you through each program, and updated practice projects at the end of each chapter challenge you to improve those programs and use your newfound skills to automate similar tasks. Don't spend your time doing work a well-trained monkey could do. Even if you've never written a line of code, you can make your computer do the grunt work. Learn how in Automate the Boring Stuff with Python, 2nd Edition.

This book introduces Python programming language and fundamental concepts in algorithms and computing. Its target audience includes students and engineers with little or no background in programming, who need to master a practical programming language and learn the basic thinking in computer science/programming. The main contents come from lecture notes for engineering students from all disciplines, and has received high ratings. Its materials and ordering have been adjusted repeatedly according to classroom reception. Compared to alternative textbooks in the market, this book introduces the underlying Python implementation of number, string, list, tuple, dict, function, class, instance and module objects in a consistent and easy-to-understand way, making assignment, function definition, function

call, mutability and binding environments understandable inside-out. By giving the abstraction of implementation mechanisms, this book builds a solid understanding of the Python programming language.

A Hands-On, Project-Based Introduction to Programming

An Introduction to Computer Science

An Introduction to Python and Computer Programming

Introduction to Programming with Python Coding Language + Python for Data Analysis: Introduction to Programming with Python Coding Language, Crash Course

With Application to Understanding Data

Introduction to Programming Concepts with Case Studies in 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 tra with a single overarching goal: to present the core concepts of computer science as simply as possible without being simplistic.

NOTE: You are purchasing a standalone product: MyProgrammingLab does not come packaged with this content. If you would like to purchase both the physical text and MyProgrammingLab search for 0134059840 / 9780134059846 Introduction to Computing and Programming in Python plus MyProgrammingLab with Pearson eText -- Access Card -- for Introduction to Computing and Programming in Python 0134025547 / 9780134025544 Introduction to Computing and Programming in Python, 4/e MyProgrammingLab should only be purchased when required by an instructor. Social Computing and Programming in Python is a uniquely researched and up-to-date volume that is widely recognized for its successful introduction to the subject of Media Computation. Emphasizing creativity, classroom interaction, and in-class programming examples, Introduction to Computing and Programming in Python takes a bold and unique approach to computation the relevancy of digital media. The Fourth Edition teaches students to program in an effort to communicate via social computing outlets, providing a unique approach that serves the interests of a broad range of students. Also Available with MyProgrammingLab® This title is also available with MyProgrammingLab -- an online homework, tutorial, and assessment product that will engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Students, if interested in purchasing this title with MyProgrammingLab, ask your instructor for more information. MyProgrammingLab is an online homework, tutorial, and assessment product that will engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Students, if interested in purchasing this title with MyProgrammingLab, ask your instructor for more information.

Today, anyone in a scientific or technical discipline needs programming skills. Python is an ideal first programming language, and Introduction to Programming in Python is the best guide to learning it. Princeton University's Robert Sedgewick, Kevin Wayne, and Robert Dondero have crafted an accessible, interdisciplinary introduction to programming in Python for students in a wide range of disciplines. This book is designed to help students learn to apply programming to real-world applications, not toy problems. The authors supply the tools needed for students to learn that programming is a natural, satisfying, and creative experience. This example-driven guide focuses on Python's most useful features and brings programming to life for every student in the sciences, engineering, and computer science. Coverage includes statements, built-in data types, conditionals, loops, arrays, and I/O, including graphics and sound Functions, modules, and libraries: organizing programs into components that can be independently debugged, maintained, and reused Object-oriented programming and data abstraction: objects, modularity, encapsulation, and more Algorithms and data structures: sorting, searching, and graph algorithms Symbol tables Examples from applied math, physics, chemistry, biology, and computer science—all compatible with Python 2 and 3 Drawing on their extensive classroom experience, the authors provide Q&As, exercises, and opportunities for creative practice throughout. An extensive amount of supplementary information is available at introductory level. This book is designed to help students learn to apply programming to real-world applications, not toy problems. The authors supply the tools needed for students to learn that programming is a natural, satisfying, and creative experience. This example-driven guide focuses on Python's most useful features and brings programming to life for every student in the sciences, engineering, and computer science. Coverage includes statements, built-in data types, conditionals, loops, arrays, and I/O, including graphics and sound Functions, modules, and libraries: organizing programs into components that can be independently debugged, maintained, and reused Object-oriented programming and data abstraction: objects, modularity, encapsulation, and more Algorithms and data structures: sorting, searching, and graph algorithms Symbol tables Examples from applied math, physics, chemistry, biology, and computer science—all compatible with Python 2 and 3 Drawing on their extensive classroom experience, the authors provide Q&As, exercises, and opportunities for creative practice throughout. An extensive amount of supplementary information is available at introductory level.

For college-level Computer Science courses in Python Basic Programming and Problem Solving in Python As one of the most widely used programming languages in the software industry, Python is desirable to both learn and teach. Introduction to Programming Using Python is designed for students eager to learn about the world of programming. This textbook provides students with the tools to harness the powerful syntax of Python and understand how to develop computer programs. The compactly written text leverages highly focused chapters, diving deep into the most significant topics to give students an in-depth (rather than superficial) understanding of the language. Using real-world examples and data, the author illustrates practical usage of Python in a way to which students can relate. The text itself is readable, organized, and informative, discussing main points of each topic first and then addressing the peripheral details. Students learn good programming habits the first time—bringing them in line with the best modern programming practices. MyProgrammingLab® not included. If you are purchasing this title with MyProgrammingLab, ask your instructor for more information. MyProgrammingLab is an online homework, tutorial, and assessment product that will engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Students, if interested in purchasing this title with MyProgrammingLab, ask your instructor for more information.

Python Crash Course, 2nd Edition

A Primer on Scientific Programming with Python

Introduction to Programming Using Python, Student Value Edition

Introduction to Programming Using Python

A Multimedia Approach

Bite-Size Python

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For college-level Computer Science courses in Python Basic Programming and Problem Solving in Python As one of the most widely used programming languages in the software industry, Python is desirable to both learn and teach. Introduction to Programming Using Python is designed for students eager to learn about the world of programming. Applicable to a range of skill levels, this First Edition textbook provides students with the tools to harness the powerful syntax of Python and understand how to develop computer programs. The compactly written text leverages highly focused chapters, diving deep into the most significant topics to give students an in-depth (rather than superficial) understanding of the language. Using real-world examples and data, the author illustrates practical usage of Python in a way to which students can relate. The text itself is readable, organized, and informative, discussing main points of each topic first and then addressing the peripheral details. Students learn good programming habits the first time—bringing them in line with the best modern programming practices. Classroom-tested by tens of thousands of students, this new edition of the bestselling intro to programming book is for anyone who wants to understand computer science. Learn about design, algorithms, testing, and debugging. Discover the fundamentals of programming with Python 3.6—a language that's used in millions of devices. Write programs to solve real-world problems, and come away with everything you need to produce quality code. This edition has been updated to use the new language features in Python 3.6.

Python Crash Course is a fast-paced, thorough introduction to Python that will have you writing programs, solving problems, and making things that work in no time. In the first half of the book, you'll learn about basic programming concepts, such as lists, dictionaries, classes, and loops, and practice writing clean and readable code with exercises for each topic. You'll also learn how to make your programs interactive and how to test your code safely before adding it to a project. In the second half of the book, you'll put your new knowledge into practice with three substantial projects: a Space Invaders-inspired arcade game, data visualizations with Python's super-handly libraries, and a simple web app you can deploy online. As you work through Python Crash Course you'll learn how to: -Use powerful Python libraries and tools, including matplotlib, NumPy, and Pygal -Make 2D games that respond to keypresses and mouse clicks, and that grow more difficult as the game progresses -Work with data to generate interactive visualizations -Create and customize Web apps and deploy them safely online -Deal with mistakes and errors so you can solve your own programming problems If you've been thinking seriously about digging into programming, Python Crash Course will get you up to speed and have you writing real programs fast. Why wait any longer? Start your engines and code! Uses Python 2 and 3

Would you like to gather big datasets, analyze them, and visualize the results, all in one program? If this describes you, then Introduction to Python Programming for Business and Social Science Applications is the book for you. Authors Frederick Kaefer and Paul Kaefer walk you through each step of the Python package installation and analysis process, with frequent exercises throughout so you can immediately try out the functions you've learned. Written in straightforward language for those with no programming background, this book will teach you how to use Python for your research and data analysis. Instead of teaching you the principles and practices of programming as a whole, this application-oriented text focuses on only what you need to know to research and answer social science questions. The text features two types of examples, one set from the General Social Survey and one set from a large taxi trip dataset from a major metropolitan area, to help readers understand the possibilities of working with Python. Chapters on installing and working within a programming environment, basic skills, and necessary commands will get you up and running quickly, while chapters on programming logic, data input and output, and data frames help you establish the basic framework for conducting analyses. Further chapters on web scraping, statistical analysis, machine learning, and data visualization help you apply your skills to your research. More advanced information on developing graphical user interfaces (GUIs) help you create functional data products using Python to inform general users of data who don't work within Python. First there was IBM® SPSS®, then there was R, and now there's Python. Statistical software is getting more aggressive - let authors Frederick Kaefer and Paul Kaefer help you tame it with Introduction to Python Programming for Business and Social Science Applications.

Python Crash Course

A Gentle Introduction to Numerical Simulations with Python

An Interdisciplinary Approach

Powerful Object-Oriented Programming

An Introduction to Python Programming

Introduction to Python Programming

This book presents computer programming as a key method for solving mathematical problems. There are two versions of the book, one for MATLAB and one for Python. The book was inspired by the Springer book TCSE 6: A Primer on Scientific Programming with Python (by Langtangen), but the style is more accessible and concise, in keeping with the needs of engineering students. The book outlines the shortest possible path from no previous experience with programming to a set of skills that allows the students to write simple programs for solving common mathematical problems with numerical methods in engineering and science courses. The emphasis is on generic algorithms, clean design of programs, use of functions, and automatic tests for verification.

Introduction to Digital Music with Python Programming provides a foundation in music and code for the beginner. It shows how coding empowers new forms of creative expression while simplifying and automating many of the tedious aspects of production and composition. With the help of online, interactive examples, this book covers the fundamentals of rhythm, chord structure, and melodic composition alongside the basics of digital production. Each new concept is anchored in a real-world musical example that will have you making beats in a matter of minutes. Music is also a great way to learn core programming concepts such as loops, variables, lists, and functions, Introduction to Digital Music with Python Programming is designed for beginners of all backgrounds, including high school students, undergraduates, and aspiring professionals, and requires no previous experience with music or code.

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

This open access book offers an initial introduction to programming for scientific and computational applications using the Python programming language. The presentation style is compact and example-based, making it suitable for students and researchers with little or no prior experience in programming. The book uses relevant examples from mathematics and the natural sciences to present programming as a practical toolbox that can quickly enable readers to write their own programs for data processing and mathematical modeling. These tools include file reading, plotting, simple text analysis, and using NumPy for numerical computations, which are fundamental building blocks of all programs in data science and computational science. At the same time, readers are introduced to the fundamental concepts of programming, including variables, functions, loops, classes, and object-oriented programming. Accordingly, the book provides a sound basis for further computer science and programming studies.

An Introduction to Programming

Introduction to Computing and Programming in Python

A Complete Introduction to the Python Language

Introduction to Digital Music with Python Programming

2 Books in 1. Introduction + Advanced. The Complete Guide to Learn Python Programming Language