Core Python Programming - Wesly J Chun 2006-09-18 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/Python, 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, 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 Python, 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, with tips on migrating to the next generation!

Core Python Programming - Chun 2006 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.

Advanced Core Python Programming - Gabriele Lanaro 2019-02-22 Create distributed applications with clever design patterns to solve complex problems. Key Features Set up and run distributed algorithms on a cluster using Dask and PySpark. Master skills to accurately implement concurrency in your code. Gain practical experience of Python design patterns with real-world examples. Book Description: This Learning Path shows you how to leverage the power of both native and third-party Python libraries for building robust and responsive applications. You will learn about profilers and reactive programming, concurrency and parallelism, as well as tools for making your apps quick and efficient. You will discover how to write code for parallel architectures using TensorFlow and Theano, and use a cluster of computers for large-scale computations using technologies such as Dask and PySpark. With the knowledge of how Python design patterns work, you will be able to clone objects, secure interfaces, dynamically choose algorithms, and accomplish much more in high performance computing. By the end of this Learning Path, you will have the skills and confidence to build engaging models that quickly offer efficient solutions to your problems. This Learning Path includes content from the following Packt products:

Python High Performance - Second Edition by Gabriele Lanaro Mastering Concurrency in Python by Quan Nguyen Mastering Python Design Patterns by Sakis Kasampalis What you will learn Use NumPy and pandas to import and manipulate datasets Achieve native performance with Python and Numba Write asynchronous code using asyncio and RxPy Design highly scalable programs with application scaffolding Explore abstract methods to maintain data consistency Clone objects using the prototype pattern Use the adapter pattern to make incompatible interfaces compatible Employ the strategy pattern to dynamically choose an algorithm Who this book is for This Learning Path is specially designed for Python developers who want to build high-performance applications and learn about single core and multi-core programming, distributed concurrency, and Python design patterns. Some experience with Python programming language will help you get the most out of this Learning Path.

Core Python Programming - Wesley Chun 2001-01 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 Programming - John M. Zelle 2004 This book is suitable for use in a university-level first course in computing (CS1), as well as the increasingly popular course known as CS2. 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.

Python for Everybody - Charles R. Severance 2016-04-09 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. The course materials are available to you under a Creative Commons License so you can adapt them to teach your own Python course.

Basic Core Python Programming - Meenu Kohli 2021-04-21 Learn the most popular software programming language in easy steps! Key Features: Extensive coverage on fundamentals and core concepts of Python programming. A comprehensive reference guide to crack Python Interviews and exams. Includes ample MCQs and solved examples to prepare you for theory and practical exams. Easy-to-understand text with explanatory illustrations. Description Basic Core Python Programming is an absolute beginners book. It focuses on the fundamentals of Python programming and simplifies coding concepts. This book makes it easy to learn the concepts of Python variables, Expressions, Decision structures, and Iteration. Equipped with a lot of exercises and examples.

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[Book] Core Python Programming By Dr R Nageswara Rao
This book does not assume any previous programming experience, although of course, any exposure to other connection between what students are learning and how they may apply that knowledge. Features of this book been written with the goal to provide students with a textbook that can be easily understood and to make a learning of students which is fine-tuned by the authors' experience with large sections of students. This book uses significantly from student to student, the book's overall overture addresses the challenges of teaching and prescribed by various top universities in USA, Europe, and Asia. Since the prerequisite know-how varies details. The contents of the book are chosen with utmost care after analyzing the syllabus for Python course its philosophy but also in its overall focus, level of activities, development of topics, and attention to programming approach to the concepts of Python Programming for students. This book differs from traditional texts not only in written for students who are beginners in the field of computer programming. This book presents an intuitive guide to create a pedagogically sound and accessible textbook that emphasises on core concepts of Python programming. The primary goal of this book is to create a pedagogically sound and accessible textbook that emphasises on core concepts of Python programming. The book contains lots of practical examples to show the working of a particular code construct. The book is intended for anyone who wish to learn python programming language. This book covers Basics to Advanced Python Programming where each topic is explained with the help of Illustrations and Examples. More than 450 solved programs of this book are tested in Python 3.4.3 for windows. The range of Python Topics covered makes this book unique which can be used as a self study material or for instructor assisted teaching. This books covers Python Syllabus of all major national and international universities. Also it includes frequently asked questions for interviews and examination which are provided at the end of each chapter.

Who this book is for
The book is intended for anyone who wish to learn python programming language. This book covers Python Syllabus of all major national and international universities. Also it includes frequently asked questions for interviews and examination which are provided at the end of each chapter.

Programming With Python-Vaibhav Gondaliya 2019-08-30 About Book Python programming language book. This book contains every details regarding python basic knowledge. From installation of Python software in computer to Data file handling in Python. Every topic is covered. Pictorial explanation is also provided. Solved programs, unsolved questions for reader is also given. Every topic is explained in best possible way. content is from scratch to database handling.

Python Made Simple-Beri Rydhm 2019-09-20 Take tiny steps to enter the big world of data science through this interesting guide.Key features Acquire basic concepts related to python programming Understand the core functionalities of Python Programming Provide the information regarding idle IDE Computational Problem solving in Python Object oriented concepts in python Programming with Python 3.4.3 for windows. The range of Python Topics covered makes this book unique which can be used as a self study material or for instructor assisted teaching. This books covers Python Syllabus of all major national and international universities. Also it includes frequently asked questions for interviews and examination which are provided at the end of each chapter.

Python Programming-Reema Thareja 2019-03 Python Programming is designed as a textbook to fulfill the requirements of the first-level course in Python programming. It is suited for undergraduate degree students of computer science engineering, information technology as well as computer applications. The book aims to introduce the students to the fundamentals of computing and the concepts of Python programming language, and enable them to apply these concepts for solving real-worldproblems.

Introduction to Python Programming-Gowrishankar S 2018-12-07 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 detail. This book can be used with almost any data structure and it can be applied in different domains. The book is designed to be used in introductory courses in Python programming, and it covers the basic concepts of Python programming language, and enables the students to develop an understanding of the fundamental concepts of programming.

Q&A's, you don't just practice the programming but also gain an in-depth understanding of the basic concepts of Python. You will start your journey right from how to go about Python installation and start using its interactive development environment and go on to learn how to build logic and implement it with coding. You will explore different types of data, operators, and in-built functions. This book covers numerous coding examples that will help you understand the importance of each data type, how to work with each one of them, and when to use them. You can learn some more practical useful concepts like how to implement control structures and use them for decision making and controlling the program flow. WHAT YOU WILL LEARN • Stronghold on Python variables, expressions, decision structures, and iterations. • Practical knowledge on how to work with various data types, operators, and in-built functions. • Learn to implement strings, lists, arrays, and control structures. • Learn how to control the program flow and how to use it for decision-making. • A great reference book on Python basics for software programmers. WHO THIS BOOK IS FOR This book is highly appealing to all tech-savvy students, programming enthusiasts, IT undergraduates, and computer science students. You do not need any prior knowledge of programming to begin with this book as long as you have the interest to learn to program. TABLE OF CONTENTS 1. Introduction 2. Python Basics 3. Numbers, Operators, and In-built Functions 4. Strings, Lists and Arrays 5. Tuples and Dictionaries 7. Sets and Frozen Sets 8. Program Flow Control in Python
without having any prior knowledge of python programming. Table of contents1. Introduction to Python2. Python Fundamentals3. Expression and Operators4. Control Statements5. Functions6. List Processing7. Tuple Processing8. String Processing9. Exception Handling12. Object Oriented Programming13. Inheritance & Polymorphism14. Database Design in Python About the author: Dr. Raybes Beri teaches in BBV DA College for Women, Amritsar, as an Assistant Professor, since last three years and has 5 years of experience in the field of education and 3 years of experience in research. Her research interests include MANETs, Cloud computing, IOT, Fog Computing. She has done M.Sc. Computer Science from BBV DA College for Women in 2013 and MCA from Lovely Professional University in 2015. In the field of IOT and embedded systems. She has a deep knowledge of programming and has worked for different projects in languages like, .Net, Java, PHP and Python. Currently she is working on Python programming and relate it to IOT and Machine learning field.She has published 19 research papers out of which 17 are international and 2 are national research papers. She has also been working as a reviewer in conferences and journals. In her leisure time, she likes to attend workshops and conferences and likes to program applications. Her Blog link: https://rydhmberi.weebly.com/ Her LinkedIn Profile: https://www.linkedin.com/in/rydhm-beri-47a721101/ 

Introduction to Programming in Python—Robert Sedgewick 2015-05-27 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 that emphasizes important and engaging 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 Basic elements of programming: variables, assignment statements, if statements, loops, arrays, conditional expressions, and soundly implemented 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; and Algorithms and data structures: sort/search algorithms, stacks, queues, and symbol tables. Examples from applied math, physics, chemistry, biology, and computer science—all compatible with Python 2 and 3—on 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 introcs.cs.princeton.edu/python. With source code, I/O libraries, solutions to selected exercises, and much more, this companion website empowers people to use their own computers to teach and learn the material.

Python for Data Science For Dummies—John Paul Mueller 2019-01-29 The fast and easy way to learn Python programming and statistics Python is a general-purpose programming language created in the late 1980s—and named after Monty Python—that’s used by thousands of people to do things from testing microchips at Intel, to powering Instagram, to building video games with PyGame library. Python For Data Science For Dummies is written for people who are new to data analysis, and discusses the basics of Python data analysis programming and statistics. It covers accessing NumPy, accessing SciPy, accessing Pandas, accessing Matplotlib, accessing SciKit-Learn, accessing Gensim, accessing Pandas, accessing Spark, accessing PySpark, and accessing Dask. Get started with data science and Python Visualize information Walre data Learn from data The book provides the statistical background needed to get started in data science programming, including probability, random distributions, hypothesis testing, confidence intervals, and building regression models for prediction.

Python For Dummies—Stef March 2011-05-09 Python is one of the most powerful, easy-to-read program languages around, but it does have its limitations. This general-purpose, high-level language that can be extended and embedded is asmart option for many programming problems, but a poor solution toolers. Python For Dummies is the quick-and-easy guide to gettingmost out of this robust program. This hands-on book will showyou everything you need to know about building programs, debugging code, and simplifying development, as well as defining what object action can perform. You’ll wrap yourself around all of developed features and become an expert Python user in no time. This guide you the tools you need: Master basic elements and syntax Document, design, and debug programs Work with strings like a pro Direct a program with control structures Integrate integers, complex numbers, and modules Build lists, stacks, and queues Create an organized dictionary Handle functions, data, and namespace Construct applications with modules and packages

Call, create, extend, and override classes Access the Internet to enhance your library Understand the new features of Python 2.5 Packed with critical idioms and great resources to maximize your productivity, Python For Dummies is the ultimate one-stop-information guide. In a matter of minutes you’ll be familiar with Python’s building blocks, strings, dictionaries, and sets, and be on your way to writing the program that you've dreamed about!

Learning Python—Mark Lutz 2013-06-12 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 2.x and 3.x lines—plus all other releases in common use today. You’ll also learn some advanced techniques that have become more common in Python code. Explore the new features of Python 3, such as native 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.

Advanced Python Programming—Dr. Gabriele Lanaro 2019-02-28 Create distributed applications with clever design patterns to solve complex problems. Key Features Set up and run distributed algorithms on a cluster using Dask and PySpark Master skills to accurately implement concurrency in your code. Gain practical experience with Python design patterns with real-world examples. This book describes This Learning Path shows you how to leverage the power of both native and third-party Python libraries for building robust and responsive applications. You will learn about profilers and reactive programming, concurrency and parallelism, as well as tools for making your apps quick and efficient. You will discover how to write code for parallel architectures using TensorFlow and Theano, and use a cluster of computers for large-scale computations using technologies such as Dask and PySpark. With the knowledge of how Python design patterns work, you will be able to clone objects, secure interfaces, dynamically choose algorithms, and accomplish much more in high performance computing. By the end of this Learning Path, you will have the skills and confidence to build engaging models that quickly offer efficient solutions to your problems. This Learning Path includes content from the following Packt products: Python High Performance - Second Edition by Gabriele Lanaro Mastering Concurrency in Python by Quan Nguyen Mastering Python Design Patterns by Sakis Kasampalis What will you learn Use NumPy and pandas to import and manipulate datasets Achieve native performance with Python and Numba Write asynchrony code using asyncio and RxPy Design highly scalable programs with application scaffolding Explore abstract methods to maintain data consistency Clone objects using the prototype pattern Use the adapter pattern to make incompatible interfaces compatible Employ the strategy pattern to dynamically choose an algorithm Who is this book for? This Learning Path is designed for Python developers and 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 a

The Python Book—Amy Best 2018

Introduction to Computation and Programming Using Python, second edition—John V. Guttag 2016-08-12 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. This edition includes new exercises that allow 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 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.

**Introduction to Computer Science Using Python**-Charles Dierbach 2012-11-30 Introduction to Computer Science Using Python: A Computational Problem-Solving Focus, recommended by Guido van Rossum, the creator of Python ("This is not your average Python book...I think this book is a great text for anyone teaching CS1"). With a focus on computational problem solving from Chapter 1, this text provides numerous hands-on exercises and examples, each chapter ending with a significant-size program demonstrating the step-by-step process of program development, testing, and debugging. A final chapter includes the history of computing, starting with Charles Babbage, containing over 65 historical images. An end-of-book Python 3 Programmers' Reference is also included for quick lookup of Python details. Extensive instructor materials are provided for those adopting for classroom use, including an instructors' manual, over 1,000 well-developed slides covering all fundamental topics of each chapter, source code, and test bank.

**Hands-On Data Structures and Algorithms with Python**-Dr. Basant Agarwal 2018-10-31 Learn to implement complex data structures and algorithms using Python Key Features Understand the analysis and design of fundamental Python data structures Explore advanced Python concepts such as Big O notation and dynamic programming Learn functional and reactive implementations of traditional data structures Book Description Data structures allow you to store and organize data efficiently. They are critical to any problem, providing a complete solution to many real-life problems. Hands-On Data Structures and Algorithms with Python teaches you the essential Python data structures and the most common algorithms for building easy and maintainable applications. This book helps you to understand the power of linked lists, double linked lists, and circular linked lists. You will learn to create complex data structures, such as graphs, stacks, and queues. As you make your way through the chapters, you will explore the application of binary searches and binary search trees, along with learning common techniques and structures used in tasks such as preprocessing, modeling, and transforming data. In the concluding chapters, you will get to grips with organizing your code in a manageable, consistent, and extendable way. You will also study how to bubble sort, selection sort, insertion sort, and merge sort algorithms in detail. By the end of the book, you will have learned how to build components that are easy to understand, debug, and use in different applications. You will get insights into Python implementation of all the important and relevant algorithms. What you will learn Understand object representation, attribute binding, and data encapsulation Algorithms and data structures built-in to Python Standard algorithms and data structures built in Python with examples with pictorial representation Learn complex algorithms through easy explanation, implementing Python Build sophisticated and efficient data applications in Python Understand common programming algorithms used in Python data science Write efficient and robust code in Python 3.7 Who this book is for This book is for developers who want to learn data structures and algorithms in Python to build complex and flexible programs. Basic Python programming knowledge is expected.

**Programming with Python for Social Scientists**-Phillip D. Brooker 2019-12-09 As data become 'big', fast and massive, the software and computing tools needed to manage and analyze them are rapidly developing. Social scientists need new tools to meet these challenges, tackle big datasets, while also developing a more nuanced understanding of - and control over - how these computing tools and algorithms are implemented. Programming with Python for Social Scientists offers a vital foundation to one of the most powerful tools used in computer science, specifically for social science researchers, assuming no prior coding knowledge. It guides you through the full research process, from question to publication, including: • The fundamentals of why and how to do your own programming in social scientific research • Questions of ethics and research design • A clear, easy to follow 'how-to' guide to using Python, with a wide array of applications such as data visualisation, social media data research, social network analysis, and more. Accompanied by numerous code examples, screenshots, sample data sources, this is the textbook for social scientists looking for a complete introduction to programming with Python and incorporating it into their research design and analysis.

**Python for Data Analysis**-Wes McKinney 2017-09-25 Get complete instructions for manipulating, processing, cleaning, and analyzing datasets in Python. Updated for Python 3.6, the second edition of this hands-on guide is packed with practical case studies that show you how to solve a broad set of data analysis problems effectively. You'll learn the latest versions of pandas, NumPy, IPython, and Jupyter in the process. Written by Wes McKinney, the creator of the Python pandas project, this book is a practical, modern introduction to data science tools in Python. It's ideal for analysts new to Python and for Python programmers new to data science and scientific computing. Data files and related material are available on GitHub. Use the Python shell and Jupyter notebook for exploratory computing. Learn features in NumPy (Numerical Python) Get started with data analysis tools in the pandas library Use flexible tools to load, clean, transform, merge, and reshape data Create informative visualizations with matplotlib Apply the pandas groupby facility to slice, dice, and summarize data Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples

**Python Network Programming**-Abhishek Ratan 2019-01-31 Power up your network applications with Python programming Key Features Master Python skills to develop powerful network applications Grasp the fundamentals and functionalities of SDN Design multi-threaded, event-driven architectures for echo and chat servers Book Description This Learning Path highlights major aspects of Python network programming such as writing deploying SDN applications, creating and deploying SDN network with Mininet. You’ll also learn how to automate legacy and the latest network devices. As you progress through the chapters, you’ll use Python for DevOps and open source tools to test, secure, and analyze your network. Toward the end, you’ll develop client-side applications, such as web API clients, email clients, SSH, and FTP, using socket programming. By the end of this Learning Path, you will have learned how to analyze a network’s security vulnerabilities using advanced network packet capture and analysis techniques. This Learning Path includes content from the following Packt products: Practical Network Automation by Abhishek Ratan Mastering Python Networking by Eric Chou Python Network Programming Cookbook, Second Edition by Pradeeban Kathiravelu, Dr. M. O. Faruque Sarker What will you learn Create socket-based networks with asynchronous models Develop client apps for web APIs, including S3 Amazon and Twitter Talk to email and remote network servers with different protocols Integrate Python with Cisco, Juniper, and Arista eAPI for automation Use Telnet and SSH connections for remote system monitoring Interact with websites via XML-RPC, SOAP, and REST APIs Build networks with Ryu, OpenDaylight, Floodlight, ONOS, and POX Configure virtual networks in different deployment environments Who this book is for If you are a Python developer or a system administrator who wants to start network programming, this Learning Path gets you a step closer to your goal. IT professionals and DevOps engineers who are new to managing network devices or those with minimal experience looking to expand their knowledge of networking in Python will also find this Learning Path useful. Although prior knowledge of networking is not required, some experience in Python programming will be helpful for a better understanding of the concepts in the Learning Path.

**Swarm Intelligence Optimization**-Abhishek Kumar 2021-01-13 Resource optimization has always been a thrust area of research, and as the Internet of Things (IoT) is the most talked about topic of the current era of technology, it has become the need of the hour. Therefore, the idea behind this book was to simplify the journey of those who aspire to understand resource optimization in the IoT. To this end, included in this book are various real-time/offline applications and algorithms/case studies in the fields of engineering, computer science, information security, and cloud computing, along with the modern tools and various technologies used in systems, leaving the reader with a high level of understanding of various techniques and algorithms used in resource optimization.

**PYTHON PROGRAMMING AND ITS APPLICATIONS**-Dr. B. Shadaksharappa 2021-11-08 This book will...
introduce the python programming language and its Applications. Its objective is to provide a basic knowledge about python programming to the beginners. This book will cover all the basic concepts with detailed explanations with examples. This book covers simple programs to more involved and varied topics. This book covers real python codes for practice and also explains various problems better than standard solutions. Also this book includes some examples of what not to do, especially if you have programmed in other languages and try to adapt those methods in python.

The Hitchhiker's Guide to Python-Kenneth Reitz 2016-08-30 The Hitchhiker's Guide to Python takes the journeyman Pythonista to true expertise. More than any other language, Python was created with the philosophy of simplicity and parsimony. Now 25 years old, Python has become the primary or secondary language (after SQL) for many business users. With popularity comes diversity—and possibly dilution. This guide, collaboratively written by over a hundred members of the Python community, describes best practices currently used by package and application developers. Unlike other books for this audience, The Hitchhiker's Guide is light on reusable code and heavier on design philosophy, directing the reader to excellent sources that already exist.

Learn to Code by Solving Problems-Daniel Zingaro 2021-06-21 Learn to Code by Solving Problems is a practical introduction to programming using Python. It uses coding-competition challenges to teach you the mechanics of coding and how to think like a savvy programmer. Computers are capable of solving almost any problem when given the right instructions. That’s where programming comes in. This beginner’s book will have you writing Python programs right away. You’ll solve interesting problems drawn from real coding competitions and build your programming skills as you go. Every chapter presents problems from coding challenge websites, where online judges test your solutions and provide targeted feedback. As you practice using core Python features, functions, and techniques, you’ll develop a clear understanding of data structures, algorithms, and other programming basics. Bonus exercises invite you to explore new concepts on your own, and multiple-choice questions encourage you to think about how each piece of code works. You’ll learn how to: • Run Python code, work with strings, and use variables • Write programs that make decisions • Make code more efficient while and for loops • Use Python sets, lists, and dictionaries to organize, sort, and search data • Design programs using functions and top-down design • Create complete-search algorithms and use Big O notation to design more efficient code. By the end of the book, you’ll not only be proficient in Python, but you’ll also understand how to think through problems and tackle them with code. Programming languages come and go, but this book gives you the lasting foundation you need to start thinking like a programmer.

Python Programming for Biology-Tim J. Stevens 2015-02-12 Do you have a biological question that could be readily answered by computational techniques, but little experience in programming? Do you want to learn more about the core techniques used in computational biology and bioinformatics? Written in an accessible style, this guide provides a foundation for both newcomers to computer programming and those interested in learning more about computational biology. The chapters guide the reader through: a complete beginners’ course to programming Python with an emphasis on computational biology and data science; statistical methods with working Python examples; scientific computing techniques, including image analysis, statistics and machine learning. This book also functions as a language reference written in straightforward English, covering the most common Python language elements and a glossary of computing and biological terms. This title will teach undergraduates, postgraduates and professionals working in the life sciences how to program with Python, a powerful, flexible and easy-to-use language.

Programming Python-Mark Lutz 2006-08-23 Already the industry standard for Python users, Programming Python from O’Reilly just got even better. This third edition has been updated to reflect current best practices and the abundance of changes introduced by the latest version of the language, Python 2.5. Whether you’re a novice or an advanced practitioner, you’ll find this refreshed book more than lives up to its reputation. Programming Python is an introduction to the essential Python topics and techniques needed to program Python in a clear and concise manner, with numerous examples that illustrate both correct usage and common idioms. By reading this comprehensive guide, you’ll learn how to apply Python in real-world problem domains such as: GUI programming Internet scripting Parallel processing Database management Networked applications Programming Python, Third Edition covers each of these targeted domains gradually, beginning with in-depth discussions of core concepts and then progressing toward complete programs. Large examples do appear, but only after you’ve learned enough to understand their techniques and code. Along the way, you’ll also learn how to use the Python language practically, with examples like Object-Oriented Programming (OOP) and code reuse, recurring side themes throughout this text. If you’re interested in Python programming, then this O’Reilly classic needs to be within arm’s reach. The wealth of practical advice, snippets of code, and patterns of program design can all be put into use on admiral basis—making your life easier and more productive. Reviews of the second edition: “about as comprehensive as any book can be.” –Dr. Dobb’s Journal “If the language had manuals, they would undoubtedly be the texts from O’Reilly...”Learning Python’ and ‘Programming Python’ are definitive treatments.” –SD Times

Data Analysis and Visualization Using Python-Dr. Ossama Embarkak 2018-11-20 Look at Python from a data science point of view and learn proven techniques for data visualization as used in making critical business decisions. Starting with an introduction to data science with Python, you will take a closer look at the Python environment and get acquainted with editors such as Jupyter Notebook and Spyder. After going through a primer on Python programming, you will grasp fundamental Python programming techniques used in data science. Moving on to data visualization, you will see how it caters to modern business needs and forms a key factor in decision-making. You will also take a look at some popular data visualization libraries in Python. Shifting focus to data structures, you will learn the various aspects of data structures from a data science perspective. You will then work with file I/O and regular expressions in Python, followed by gathering and cleaning data. Moving on to exploring and analyzing data, you will look at advanced data structures in Python. Then, you will take a deep dive into data visualization techniques, going through a number of plotting systems in Python. In conclusion, you will complete a detailed case study, where you’ll get a chance to revisit the concepts you’ve covered so far. What You Will Learn Python programming techniques for data science and Master data collections in Python Create engaging visualizations for BI systems Deploy effective strategies for gathering and cleaning data Integrate the Seaborn and Matplotlib plotting systems Who This Book Is For Developers with basic Python programming knowledge looking to adopt key strategies for data analysis and visualizations using Python.

Introduction to Scientific Programming with Python-Joakim Sundnes 2020 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.


Python Coding and Programming-Michael Learn 2021-03-22 55 % discount for bookstores ! Now At $34.99 instead of $45.23 $ Your customers will never stop reading this guide !!! UPDATE CHAPTERS 10 AND 11 Would you like to learn the hard core of Python coding? You are the type of genius the great eBook in the next few lines is dedicated to, check it out. Learning the complex processes of Python programming is a tough task most people don’t want to try. Even Computer Engineering, Tech and related fields do not want to, to even imagine the interest of a non-tech related fan. Why? It is for the same reason, it is complicated! It has different stages that can be easily mixed up. But isn’t there a way you can learn the hardcore easily whether you are or not in the tech fields? The eBook after the next few lines can find you the answers. Python is a top class programming
Python Programming Fundamentals - Kent D. Lee 2010-10-26 Computer programming is a skill that can bring great enjoyment from the creativity involved in designing and implementing a solution to a problem. This classroom-tested and easy-to-follow textbook teaches the reader how to program using Python, an accessible language which can be learned incrementally. Through an extensive use of examples and practical exercises, students will learn to recognize and apply abstract patterns in programming, as well as how to inspect the state of a program using a debugger tool. Features: contains numerous examples and solved practice exercises designed for an interactive classroom environment; highlights several patterns which commonly appear in programs, and presents exercises that reinforce recognition and application of these patterns; introduces the use of a debugger, and includes supporting material that reveals how programs work; presents the Tkinter framework for building graphical user interface applications and event-driven programs; provides helpful additional resources for instructors at the associated website: http://cs.luther.edu/~leekent/CS1. This hands-on textbook for active learning in the classroom will enable undergraduates in computer science to develop the necessary skills to begin developing their own programs. It employs Python as the introductory language due to the wealth of support available for programmers.

Introduction to GIS Programming and Fundamentals with Python and ArcGIS® - Chaowei Yang 2017-04-25 Combining GIS concepts and fundamental spatial thinking methodology with real programming examples, this book introduces popular Python-based tools and their application to solving real-world problems. It elucidates the programming constructs of Python with its high-level toolkits and demonstrates its integration with ArcGIS Theory. Filled with hands-on computer exercises in a logical learning workflow this book promotes increased interactivity between instructors and students while also benefitting professionals in the field with vital knowledge to sharpen their programming skills. Readers receive expert guidance on modules, package management, and handling shapefile formats needed to build their own mini-GIS. Comprehensive and engaging commentary, robust contents, accompanying datasets, and classroom-tested exercises are all housed here to permit users to become competitive in the GIS/IT job market and industry.

Programming with Python - T R Padmanabhan 2017-01-13 Based on the latest version of the language, this book offers a self-contained, concise and coherent introduction to programming with Python. The book's primary focus is on realistic case study applications of Python. Each practical example is accompanied by a brief explanation of the problem-terminology and concepts, followed by necessary program development in Python using its constructs, and simulated testing. Given the open and participatory nature of development, Python has a variety of incorporated data structures, which has made it difficult to present it in a coherent manner. Further, some advanced concepts (super, yield, generator, decorator, etc.) are not easy to explain. The book specially addresses these challenges; starting with a minimal subset of the core, it offers users a step-by-step guide to achieving proficiency.

Basics of Python Programming - Dr. Pratyush Guleria Learn a Programmer-Friendly language KEY FEATURES Strengthens the foundations, as a detailed explanation of programming language concepts are given in a 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 an in-depth explanation of complex topics and Questions It focuses on how to think logically to solve a problem Follows a systematic approach that will help you to prepare for an interview in a short duration of time Exercises are exceptionally useful to complete the reader’s understanding of a topic DESCRIPTION Book will come as a relief to the students wishing to go through a comprehensive work explaining the programming concepts of Python. Examples are given with proper description, offering a variety of practical examples and conceptual problems along with their systematically worked out solutions. It also covers all the concepts which are helpful for the students and beginners to learn the basics of Python programming. WHAT WILL YOU LEARN This book is written, taking into consideration the skills required at the beginner level for understanding Python Programming Concepts. The book covers the practical examples of Python in an easy way so that students can able to understand efficiently. WHO THIS BOOK IS FOR Book promises to be a perfect starting point for beginners and an asset for those having interest towards programming. Table of Contents 1. Introduction 2. Conditions and Loops 3. Arrays and Functions 4. Lists, Tuples, Iterators and Generators 5. Dictionaries and Modules 6. File Handling and Databases 7. Object-Oriented Programming 7. Regular Expressions, Date, and Time 8. Exception Handling 9. Practice Exercise