

have a rock-solid foundation to build upon. You will explore the foundations of Python programming, such as the built-in data types, functions, objects and classes, files, etc. You will then explore the different programming paradigms such as OOP, Functional, and Concurrent, and find the best approach given a situation. You will also learn how to utilize an interchange format to exchange data and understand how to carry out performance optimization, effective debugging, and security, among other techniques. Towards the end, you will enjoy two chapters dedicated to two domains where Python usage is currently very strong: Data Science and Web Development. What will you learn Learn how to improve your Python Code Quality. Explore the techniques and frameworks for Python GUI Programming. Solve Data Science and Machine Learning problems using Python. Get familiar with Python web frameworks; Django and Flask. Who this book is for This book is for anyone who is new to Software Development and wants to learn Python. Existing Python users can also use this book for a quick reference for the fundamentals and the features introduced in Python 3.7. Table of Contents 1. Getting Started with Python 2. Program Flow and Error Handling 3. Functions, Modules, and Functional Programming 4. Useful Modules and Libraries 5. Object Orientation 6. Decorators and Iterators 7. Files and Data Persistence 8. Context Managers 9. Performance Optimization 10. Cryptography 11. Concurrent Execution 12. Logging and Debugging 13. Code Style and Quality Assurance 14. Code Packaging and Dependencies 15. GUI Programming 16. Web Development 17. Data Science

Scientific Computing with Python 3 - Second Edition Jul 24 2019 An example-rich, comprehensive guide for all of your Python computational needs About This Book* Your ultimate resource for getting up and running with Python numerical computations* Explore numerical computing and mathematical libraries using Python 3.x code with SciPy and NumPy modules* A hands-on guide to implementing mathematics with Python, with complete coverage of all the key concepts Who This Book Is For This book is for anyone who wants to perform numerical and mathematical computations in Python. It is especially useful for developers, students, and anyone who wants to use Python for computation. Readers are expected to possess basic knowledge of scientific computing and mathematics, but no prior experience with Python is needed. What you will learn* The principal syntactical elements of Python* The most important and basic types in Python* The essential building blocks of computational mathematics, linear algebra, and related Python objects* Plot in Python using matplotlib to create high quality figures and graphics to draw and visualize your results* Define and use functions and learn to treat them as objects* How and when to correctly apply object-oriented programming for scientific computing in Python* Handle exceptions, which are an important part of writing reliable and usable code* Two aspects of testing for scientific programming: Manual and Automatic Detail Python can be used for more than just general-purpose programming. It is a free, open source language and environment that has tremendous potential for use within the domain of scientific computing. This book presents Python in tight connection with mathematical applications and demonstrates how to use various concepts in Python for computing purposes, including examples with the latest version of Python 3. Python is an effective tool to use when coupling scientific computing and mathematics and this book will teach you how to use it for linear algebra, arrays, plotting, iterating, functions, polynomials, and much more.

Python All-in-One For Dummies Jun 22 2019 Your one-stop resource on all things Python Thanks to its flexibility, Python has grown to become one of the most popular programming languages in the world. Developers use Python in app development, web development, data science, machine learning, and even in coding education classes. There's almost no type of project that Python can't make better. From creating apps to building complex websites to sorting big data, Python provides a way to get the work done. Python All-in-One For Dummies offers a starting point for those new to coding by explaining the basics of Python and demonstrating how it's used in a variety of applications. Covers the basics of the language Explains its syntax through application in high-profile industries Shows how Python can be applied to projects in enterprise Delves into major undertakings including artificial intelligence, physical computing, machine learning, robotics and data analysis This book is perfect for anyone new to coding as well as experienced coders interested in adding Python to their toolbox.

Python in Practice Oct 07 2020 Winner of the 2014 Jolt Award for "Best Book" "Whether you are an experienced programmer or are starting your career, Python in Practice is full of valuable advice and example to help you improve your craft by thinking about problems from different perspectives, introducing tools, and detailing techniques to create more effective solutions." —Doug Hellmann, Senior Developer, DreamHost If you're an experienced Python programmer, Python in Practice will help you improve the quality, reliability, speed, maintainability, and usability of all your Python programs. Mark Summerfield focuses on four key themes: design patterns for coding elegance, faster processing through concurrency and compiled Python (Cython), high-level networking, and graphics. He identifies well-proven design patterns that are useful in Python, illuminates them with expert-quality code, and explains why some object-oriented design patterns are irrelevant to Python. He also explores several counterproductive myths about Python programming—showing, for example, how Python can take full advantage of multicore hardware. All examples, including three complete case studies, have been tested with Python 3.3 (and, where possible, Python 3.2 and 3.1) and crafted to maintain compatibility with future Python 3.x versions. All code has been tested on Linux, and most code has also been tested on OS X and Windows. All code may be downloaded at www.qtrac.eu/zipbook.html. Coverage includes Leveraging Python's most effective creational, structural, and behavioral design patterns Supporting concurrency with Python's multiprocessing, threading, and concurrent.futures modules Avoiding concurrency problems using thread-safe queues and futures rather than fragile locks Simplifying networking with high-level modules, including xmppolb and RPyC Accelerating Python code with Cython, C-based Python modules, profiling, and other techniques Creating modern-looking GUI applications with Tkinter Leveraging today's powerful graphics hardware via the OpenGL API using pyglet and PyOpenGL

Learn Python in 7 Days Jul 16 2021 Learn efficient Python coding within 7 days About This Book Make the best of Python features Learn the tinge of Python in 7 days Learn complex concepts using the most simple examples Who This Book Is For The book is aimed at aspiring developers and absolute novice who want to get started with the world of programming. We assume no knowledge of Python for this book. What You Will Learn Use if else statement with loops and how to break, skip the loop Get acquainted with python types and its operators Create modules and packages Learn slicing, indexing and string methods Explore advanced concepts like collections, class and objects Learn dictionary operation and methods Discover the scope and function of variables with arguments and return value In Detail Python is a great language to get started in the world of programming and application development. This book will help you to take your skills to the next level having a good knowledge of the fundamentals of Python. We begin with the absolute foundation, covering the basic syntax, type variables and operators. We'll then move on to concepts like statements, arrays, operators, string processing and I/O handling. You'll be able to learn how to operate tuples and understand the functions and methods of lists. We'll help you develop a deep understanding of list and tuples and learn python dictionary. As you progress through the book, you'll learn about function parameters and how to use control statements with the loop. You'll further learn how to create modules and packages, storing of data as well as handling errors. We later dive into advanced level concepts such as Python collections and how to use class, methods, objects in python. By the end of this book, you will be able to take your skills to the next level having a good knowledge of the fundamentals of Python. Style and approach Fast paced code to get you up-to-speed with the language. Every chapter is followed by an exercise that focuses on building something with the language. The codes of the exercises can be found on the Packt website

Python para Principiantes Aug 29 2022 ¿Te gustaría a empezar a programar con Python desde cero? ¿Esta es la forma más fácil de encontrarlo? ¿A qué esperas? ¡Sigue leyendo! Esta caja incluye: Programación Python para principiantes: La guía definitiva para principiantes para aprender los fundamentos de Python en un gran curso intensivo lleno de nociones, consejos y trucos. ¿Siempre has querido aprender a programar? ¿Alguna vez pensaste que era demasiado difícil o? ¿O pensaste que no tenías suficientes habilidades necesarias? Si es así, ¡sigue leyendo... La PROGRAMMING LANGUAGES ACADEMY ha creado un camino de aprendizaje especí fico al alcance de cualquiera que quiera empezar a programar sin tener las habilidades apropiadas. Lo que encontrarás en este libro es un verdadero camino paso a paso que te llevará a de 0 a 100 en pocos días!!! Una vez que empieces a leer, apreciarás su claridad y sencillez. Los capítulos son cortos y te darán una nueva información gradualmente para que no te sientas abrumado por demasiadas nociones en total. Las ilustraciones, los ejemplos y las guías paso a paso de cada capítulo te permiten no cometer errores pero, sobre todo, no confundir. Ya no tienes que perder tiempo y dinero tratando de aprender Python en costosos cursos en línea o en libros de texto increíblemente largos que te dejan más confundido y frustrado. Libro de trabajo de Python: Aprende a programar rápidamente y eficazmente con ejercicios, proyectos y soluciones. ¿Quieres aprender uno de los lenguajes de programación más demandados hoy en día y comenzar una emocionante carrera en la ciencia de los datos, el desarrollo web o en otro campo de tu elección? ¡Aprende Python! Python es fácil de leer porque el código se parece mucho al inglés normal, pero no dejes que esta simplicidad te engañe: ¡es uno de los lenguajes de programación más poderosos y versátiles que existen! Alimenta muchos de tus sitios y servicios favoritos, incluyendo Instagram, Spotify, e incluso Google! Este libro te lleva a un viaje práctico a través de las increíbles características de Python. A diferencia de los libros que se centran sólo en conceptos teóricos, este libro te mostrará cómo se utiliza Python, y te animará a ser creativo! Esto es lo que encontrarás en este libro: Ejercicios prácticos de programación que te ayudarán a aplicar los conceptos de programación en situaciones de la vida real Ejercicios de depuración que le enseñarán a notar rápidamente los errores en el código Python Proyectos divertidos que pondrán a prueba tus conocimientos y te motivarán a practicar aún más Valiosos consejos para dominar rápidamente el código Aprender lo básico de cualquier lenguaje de programación puede parecer un poco aburrido al principio, pero una vez que hayas escrito tu primer programa que haga algo -aunque sólo sea imprimir texto en la pantalla- te emocionará y motivará a volver a imparables. Anhelarás más y más desafiante a los de programación que perfeccionarás tus habilidades! Si has intentado aprender Python antes pero te has desanimado por demasiada teoría... ¡este libro está garantizado para reavivar tu interés en la programación en Python! ¡Está listo para empezar a escribir aplicaciones Python que funcionen! Si estás preparado para aprender lo básico de la programación en Python 7 DÍAS DESDE HOY, ¡consigue una copia de este libro hoy! ¡Desplázate hacia arriba y haga clic en el botón "Proceedings of the 8th Python in Science Conference May 02 2020 The proceedings of the 8th annual Python for Scientific Computing conference. Learn Python in a Weekend Sep 29 2022 LEARN PYTHON IN THE FASTEST AND EASIEST WAY Learn Python in a weekend offers you a learning method that will allow you to learn Python in a short period of time, specifically in a weekend! Our experience has demonstrated us that the best way to learn is to do it while having fun and with a methodology that will teach you progressively all the concepts you need to know. In the first part of the book you will find an explanation of the programming language along with an introduction to the programming environment. In the second part of the book you will find a total of 100 exercises of progressive difficulty in which, in addition to guiding you step by step, we explain all the theoretical concepts of programming that you need to know to be able to carry them out. The book contains downloadable material! INDEX 1. Introduction 2. What do I need to start? 3. Learning process 4. Python 5. Development environment 6. Handling of messages on the screen 7. Use of basic data types 8. Control of the flow of a program 9. Loops 10. Project 111. Functions 12. Project 213. Basic object-oriented programming 14. Project 315. Advanced object-oriented programming 16. Working with files 17. Exception control 18. Project 419. Final Project 20. Annexes Python in a Nutshell Oct 31 2022 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 Dec 09 2020 Become a Python Programming Expert With Ease! Python is a simple yet powerful programming language that can enable you to start thinking like a programmer right from the beginning. It is very readable and the stress many beginners face about memorizing arcane syntax typically presented by other programming languages will not affect you at all. Conversely, you will be able to concentrate on learning concepts and paradigms of programming. This book shall introduce you to an easy way to learn Python in just 7 days and in this time, be able to complete your own projects! By reading the book and implementing what you learn herein, you will realize just why major institutions like NASA, Google, Mozilla, Yahoo, Dropbox, IBM, Facebook and many others prefer to use python in their core products, services and business processes. Let's begin.

Python in a Nutshell Mar 12 2021 Python was recently ranked as today's most popular programming language on the TIOBE index, thanks to its broad applicability to design and prototyping to testing, deployment, and maintenance. With this updated fourth edition, you'll learn how to get the most out of Python, whether you're a professional programmer or someone who needs this language to solve problems in a particular field. Carefully curated by recognized experts in Python, this new edition focuses on version 3.10, bringing this seminal work on the Python language fully up to date on five version releases, including preview coverage of upcoming 3.11 features. This handy guide will help you: Learn how Python represents data and program as objects Understand the value and uses of type annotations Examine which language features appeared in which recent versions Discover how to use modern Python idiomatically Learn ways to structure Python projects appropriately Understand how to debug Python code Learning Python for Forensics Jan 10 2021 Design, develop, and deploy innovative forensic solutions using Python Key Features Discover how to develop Python scripts for effective digital forensic analysis Master the skills of parsing complex data structures with Python libraries Solve forensic challenges through the development of practical Python scripts Book Description Digital forensics plays an integral role in solving complex cybercrimes and helping organizations make sense of cybersecurity incidents. This second edition of Learning Python for Forensics illustrates how Python can be used to support these digital investigations and permits the examiner to automate the parsing of forensic artifacts to spend more time examining actionable data. The second edition of Learning Python for Forensics will illustrate how to develop Python scripts using an iterative design. Further, it demonstrates how to leverage the various built-in and community-sourced forensics scripts and libraries available for Python today. This book will help strengthen your analysis skills and efficiency as you creatively solve real-world problems through instruction-based tutorials. By the end of this book, you will build a collection of Python scripts capable of investigating an array of forensic artifacts and master the skills of extracting metadata and parsing complex data structures into actionable reports. Most importantly, you will have developed a foundation upon which to build as you continue to learn Python and enhance your efficacy as an investigator. What you will learn Learn how to develop Python scripts to solve complex forensic problems Build scripts using an iterative design Design code to accommodate present and future hurdles Leverage built-in and community-sourced libraries Understand the best practices in forensic programming Learn how to transform raw data into customized reports and visualizations Create forensic frameworks to automate analysis of multiple forensic artifacts Conduct effective and efficient investigations through programmatic processing Who this book is for If you are a forensics student, hobbyist, or professional seeking to increase your understanding in forensics through the use of a programming language, then Learning Python for Forensics is for you. You are not required to have previous experience in programming to learn and master the content within this book. This material, created by forensic professionals, was written with a unique perspective and understanding for examiners who wish to learn programming.

Python for Beginners Jun 26 2022 Want to Learn Python in No Time?! Check Out This Python Programming Crash Course for Beginners! Would you like to: Learn Python in no time? Automate tasks with Python? Be able to make machines work as efficiently as possible? Monetize your programming ideas? But you: Have no prior knowledge about Python? Think that programming is complicated? If you can answer any question above with "yes," then you are in the right place. With this unique guide in your hands, you will go from beginner to pro in no time! It doesn't matter if you have never coded before; these guides will thoroughly explain to you everything about Python and data science. All guides are written in a step-by-step and easy-to-digest manner so you will understand them without any trouble. Most of the other books you can find on the market focus purely on basic theory and simple commands, but not this one. Here's what this beginner's guide can offer you: A beginner's crash course on how to get everything up and to run. Est tools that are available for programming with Python. Quick and easy way to learn how to make amazing and useful programs. Unique coding methods to go from beginner to pro in no time. Practical workbook to put your knowledge to the test and bring your ideas to life. Practical programming exercises that will help you apply programming concepts to real-life situations. Debugging activities that will teach you to notice errors in Python code quickly. Fun projects that will test your knowledge and motivate you to practice even more. If you want to conquer the Python programming language in no time, all you have to do is take these guides in your hands and follow the step-by-step instructions. So what are you waiting for? Scroll up, click on "Buy Now with 1-Click", and Get Your Copy Now!

Python in easy steps Jan 28 2020 Python in easy steps instructs you how to program in the powerful Python language, giving complete examples that illustrate each aspect with colorized source code. Python in easy steps begins by explaining how to install the free Python interpreter so you can quickly begin to create your own executable programs by copying the book's examples. It demonstrates all the Python language basics before moving on to provide examples of Object Oriented Programming (OOP) and CGI scripting to handle web form data. The book concludes by demonstrating how you can use your acquired knowledge to create and deploy graphical windowed applications. Python in easy steps makes no assumption you have previous knowledge of any programming language so it's ideal for the newcomer to computer programming. It has an easy-to-follow style that will appeal to programmers moving from another programming language, and to the student who is studying Python programming at school or college, and to those seeking a career in computing who need a fundamental understanding of computer programming. Python is the language used to program the Raspberry Pi - covered by Raspberry Pi in easy steps.

A Tour of Data Science May 14 2021 A Tour of Data Science: Learn R and Python in Parallel covers the fundamentals of data science, including programming, statistics, optimization, and machine learning in a single short book. It does not cover everything, but rather, teaches the key concepts and topics in Data Science. It also covers two of the most popular programming languages used in Data Science, R and Python, in one source. Key features: Allows you to learn R and Python in parallel Cover statistics, programming, optimization and predictive modelling, and the popular data manipulation tools - data.table and pandas Provides a concise and accessible presentation Includes machine learning algorithms implemented from scratch, linear regression, lasso, ridge, logistic regression, gradient boosting trees, etc. Appealing to data scientists, statisticians, quantitative analysts, and others who want to learn programming with R and Python from a data science perspective.

Mobile Applications Development Jun 14 2021 The book covers the concepts of Python programming language along with mobile application development. Starting from fundamentals, the book continues with the explanation of mobile app development using Kivy framework. All the chapters offer questions and exercises for better understanding the subject. At the end of the book some hands-on projects are given, to help readers to improve their programming and project development skills.

Mastering Machine Learning with Python in Six Steps Sep 25 2019 Explore fundamental to advanced Python 3 topics in six steps, all designed to make you a worthy practitioner. This updated version's approach is based on the "six degrees of separation" theory, which states that everyone and everything is a maximum of six steps away and presents each topic in two parts: theoretical concepts and practical implementation using suitable Python 3 packages. You'll start with the fundamentals of Python 3 programming language, machine learning history, evolution, and the system development frameworks. Key data mining/analysis concepts, such as exploratory analysis, feature dimension reduction, regressions, time series forecasting and their efficient implementation in Scikit-learn are covered as well. You'll also learn commonly used model diagnostic and tuning techniques. These include optimal probability cutoff point for class creation, variance, bias, bagging, boosting, ensemble voting, grid search, random search, Bayesian optimization, and the noise reduction technique for IoT data. Finally, you'll review advanced text mining techniques, recommender systems, neural networks, deep learning, reinforcement learning techniques and their implementation. All the code presented in the book will be available in the form of iPython notebooks to enable you to try out these examples and extend them to your advantage. What You'll Learn Understand machine learning development and frameworks Assess model diagnosis and tuning in machine learning Examine text mining, natural language processing (NLP), and recommender systems Review reinforcement learning and CNN Who This Book Is For Python developers, data engineers, and machine learning engineers looking to expand their knowledge or career into machine learning area.

Sams Teach Yourself Python in 24 Hours Jun 02 2020 Provides lessons and case study applications that cover such topics as using loops, making objects, using modules, expanding classes, and fixing problem code.

Learn Python in One Hour Aug 05 2020 You're already a smart person, you don't need a 1000+ page book to get you started on the web's fastest growing programming platform. Instead, *Learn Python in One Hour* delivers on the promise of code literacy while saving your most precious commodity? time itself. Volkman's innovative programming-by-example approach means you focus on usage, not mindless detail. Based on the author's sold-out live seminars, you'll see Python's flexible coding technique in action as we refactor from script to procedural to object-oriented during actual problem solving. In a twelve-lesson progression, you'll be exposed to this and more:

Basic file input and output operations, including exceptions

Using functions to compute and return multiple values

Basic elements of a class definition and how to call methods

Lists, dictionaries, sets, and other collections

Iteration through collections, files, sorted sets

Searching strings with regular expressions (regex)

Client and server programs for REST methods

Using threads in Python for multiple tasks

CGI-BIN programming for simple HTML Forms processing

Six most common Python pitfalls Take the One Hour challenge and see if you too can pick up 90% of syntax and semantics in less time than you probably spend commuting each day. About the Author *Victor R. Volkman* graduated *cum laude* from Michigan Technological University with a BS in Computer Science in 1986. Since then, he has written for numerous publications, including *The C Gazette*, *C++ Users Journal*, *Windows Developers Journal*, and many others. He has taught college-level programming courses at Washtenaw Community College and has served on its Computer Information Science (CIS) Faculty Advisory Board for more than a decade. Volkman says Python helped him "rediscover the joy of programming again." www.volkman.org From *Modern Software Press*

Python para principiantes Aug 17 2021 Si desea aprender la programación de Python en tan solo 5 días, incluso si no tiene habilidades técnicas de ningún tipo, siga leyendo... ¿Cuántas veces has pensado en aprender a codificar pero te desanimaste porque no tenías antecedentes técnicos, no tenías tiempo para aprender o simplemente no creías que eras lo suficientemente inteligente? Bueno, tenemos buenas noticias para ti. ¡No necesitas un costoso título en informática, un libro de texto de 500 páginas o una mente genial para aprender los conceptos básicos de la programación en Python! El autor más vendido de Amazon, James Tudor, proporciona una guía concisa y paso a paso para la programación de Python para principiantes. Se proporcionan muchos ejemplos, ilustraciones, resumen de final de capítulo y ejercicios de práctica (con soluciones) para ayudar al lector a aprender más rápido, recordar más tiempo y desarrollar una comprensión profunda de los conceptos clave. En este libro, descubrirás: Un conciso, sencillo. Nuevo estilo de enseñanza amigable que se presta bien a los principiantes. Capítulo que se han cortado en trozos pequeños para darle la información que necesita (en ese momento) para que no se sienta abrumado. Se utilizan muchos ejemplos e ilustraciones simples paso a paso para enfatizar conceptos clave y ayudar a mejorar su comprensión. Cada ejercicio de práctica se basa en conceptos discutidos en capítulos anteriores para que su aprendizaje se refuerce a medida que avanza. Los temas se seleccionan cuidadosamente para brindarle una amplia exposición a Python, sin abrumarlo con demasiada información (potencialmente innecesaria). Se presenta un resumen del final del capítulo para darle puntos clave que lo ayudarán a solidificar su comprensión. **MÁS, MATERIALES ADICIONALES:** Las primeras páginas de este libro le mostrarán cómo descargar un folleto de respuestas que resume toda la solución a los ejercicios de Python Data Science Handbook Aug 24 2019 For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the Python Data Science Handbook do you get them all—Python, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you'll learn how to use: iPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

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