

Introduction To Machine Learning With Python A Guide For Data Scientists

Automate the Boring Stuff with Python, 2nd Edition *Introduction to Machine Learning with Python* *Text Analytics with Python* *Cracking Codes with Python* *Begin to Code with Python* *Deep Learning with Python* *INTRODUCTION TO MACHINE LEARNING WITH PYTHON*. *Automate the Boring Stuff with Python* *Invent Your Own Computer Games with Python, 4th Edition* *The Python Book* *Math Adventures with Python* *Coding with Python* *Programming for Computations - Python* *Practical Machine Learning with Python* *Data Science with Python and Dask* *Natural Language Processing with Python and spaCy* *Data Visualization with Python* and *JavaScript Artificial Intelligence with Python* *Data Analysis with Python* *Mastering OpenCV 4 with Python* *Network Science with Python and NetworkX* *Quick Start Guide Python Programming, Deep Learning* *Maya Programming with Python Cookbook* *Program Arcade Games* *Practical Machine Learning with Python* *Beginning Python Games Development, Second Edition* *Beginning Game Development with Python and Pygame* *Getting Started with Python and Raspberry Pi* *Derivatives Analytics with Python* *Real World Instrumentation with Python* *Learning Scientific Programming with Python* *Data Wrangling with Python* *Python in a Nutshell* *Data Visualization with Python and JavaScript* *Practical Data Science with Python* *The Quick Python Book* *Python Programming Fundamentals* *Financial Theory with Python* *Automate the Boring Stuff with Python, 2nd Edition* *Introduction to Machine Learning with Python*

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Maya Programming with Python Cookbook Feb 10 2021 Master complex workflows and conquer the world with Python and Maya About This Book Improve your modelling skills and reduce your scripting problems using Python in Maya Learn to communicate with web applications using Python for easier team development A quick and practical answer to every problem you can have whilst scripting in Maya with Python Who This Book Is For This book is for Python developers who have just started scripting with Maya. What You Will Learn Find out how to use Python scripting to automate tedious tasks Create functional user interfaces to make scripts easy to share with others Add new functionality to Maya via the power of scripting Import and export arbitrary data into and out of Maya Improve your workflow, and that of your team Create custom create custom controls to make rigs that are easy to work with Implement a system to render 3D assets for isometric games Use script jobs to trigger actions automatically in response to user interaction Open a command port to allow other applications to communicate with Maya In Detail Maya is a 3D graphics and animation software, used to develop interactive 3D applications and games with stupendous visual effects. The *Maya Programming with Python Cookbook* is all about creating fast, powerful automation systems with minimum coding using Maya Python. With the help of insightful and essential recipes, this book will help you improve your modelling skills. Expand your development options and overcome scripting problems encountered whilst developing code in Maya. Right from the beginning, get solutions to complex development concerns faced when implementing as parts of build. Style and approach This book is comprised of a set of practical recipes, grouped under specific topics, which can be referred to independently or in sequence. These recipes provide quick solutions to common problems, and cover most of the real-world scenarios that developers are likely to face when working with Maya. *INTRODUCTION TO MACHINE LEARNING WITH PYTHON*. Jun 28 2022

Data Visualization with Python and JavaScript Mar 02 2020 How do you turn raw, unprocessed, or malformed data into dynamic, interactive web visualizations? In this practical book, author Kyran Dale shows data scientists and analysts—as well as Python and JavaScript developers—how to create the ideal toolchain for the job. By providing engaging examples and stressing hard-earned best practices, this guide teaches you how to leverage the power of best-of-breed Python and JavaScript libraries. Python provides accessible, powerful, and mature libraries for scraping, cleaning, and processing data. And while JavaScript is the best language when it comes to programming web visualizations, its data processing abilities can't compare with Python's. Together, these two languages are a perfect complement for creating a modern web-visualization toolchain. This book gets you started. You'll learn how to: Obtain data you need programmatically, using scraping tools or web APIs: Requests, Scrapy, Beautiful Soup Clean and process data using Python's heavyweight data processing libraries within the NumPy ecosystem: Jupyter notebooks with pandas+Matplotlib+Seaborn Deliver the data to a browser with static files or by using Flask, the lightweight Python server, and a RESTful API Pick up enough web development skills (HTML, CSS, JS) to get your visualized data on the web Use the data you've mined and refined to create web charts and visualizations with Plotly, D3, Leaflet, and other libraries

Beginning Python Games Development, Second Edition Nov 09 2020 *Beginning Python Games Development, Second Edition* teaches you how to create compelling games using Python and the PyGame games development library. It will teach you how to create visuals, do event handling, create 3D games, add media elements, and integrate OpenGL into your Python game. In this update to the first ever book to cover the popular open source PyGame games development library, you'll stand to gain valuable technical insights and follow along with the creation of a real-world, freely downloadable video game. Written by industry veterans and Python experts Will McGugan and Harrison Kinsley, this is a comprehensive, practical introduction to games development in Python. You can also capitalize upon numerous tips and tricks the authors have accumulated over their careers creating games for some of the world's largest game developers.

Coding with Python Jan 24 2022 We live in a world that has quickly become digitalized. From how we communicate to the entertainment we seek, our lives have become integrated into the growing universe of codes and coding languages. Among these, Python stands out like a beacon of hope. Easy to learn and use, this book will provide you, our future programmer, everything you need to get started on this wonderful programming journey. We will cover everything from installing Python properly and installing a suitable editor, to learning about basic programming concepts that are used with all programming languages, like data types, arithmetic operations, and loops. You will also learn about functions and how to create abstractions in your code. Also, concepts like local versus global scopes, exception handling, and how to properly comment and document your code will be made a lot clearer. So what are you waiting for? Let us take your hand and walk you across the threshold into a world of programming like you've never seen before. You will definitely not regret it! Click the BUY NOW button!

Beginning Game Development with Python and Pygame Oct 09 2020 This book provides readers with an introductory resource for learning how to create compelling games using the open source Python programming language and Pygame games development library. Authored by industry veteran and Python expert Will McGugan, readers are treated to a comprehensive, practical introduction to games development using these popular technologies. They can also capitalize upon numerous tips and tricks the author has accumulated over his career creating games for some of the world's largest gaming developers.

Natural Language Processing with Python and spaCy Sep 19 2021 An introduction to natural language processing with Python using spaCy, a leading Python natural language processing library. *Natural Language Processing with Python and spaCy* will show you how to create NLP applications like chatbots, text-condensing scripts, and order-processing tools quickly and easily. You'll learn how to leverage the spaCy library to extract meaning from text intelligently; how to determine the relationships between words in a sentence (syntactic dependency parsing); identify nouns, verbs, and other parts of speech (part-of-speech tagging); and sort proper nouns into categories like people, organizations, and locations (named entity recognizing). You'll even learn how to transform statements into questions to keep a conversation going. You'll also learn how to: Work with word vectors to mathematically find words with similar meanings (Chapter 5) Identify patterns within data using spaCy's built-in displaCy visualizer (Chapter

7) Automatically extract keywords from user input and store them in a relational database (Chapter 9) Deploy a chatbot app to interact with users over the internet (Chapter 11) "Try This" sections in each chapter encourage you to practice what you've learned by expanding the book's example scripts to handle a wider range of inputs, add error handling, and build professional-quality applications. By the end of the book, you'll be creating your own NLP applications with Python and spaCy.

Practical Machine Learning with Python Dec 11 2020 Master the essential skills needed to recognize and solve complex problems with machine learning and deep learning. Using real-world examples that leverage the popular Python machine learning ecosystem, this book is your perfect companion for learning the art and science of machine learning to become a successful practitioner. The concepts, techniques, tools, frameworks, and methodologies used in this book will teach you how to think, design, build, and execute machine learning systems and projects successfully. Practical Machine Learning with Python follows a structured and comprehensive three-tiered approach packed with hands-on examples and code. Part 1 focuses on understanding machine learning concepts and tools. This includes machine learning basics with a broad overview of algorithms, techniques, concepts and applications, followed by a tour of the entire Python machine learning ecosystem. Brief guides for useful machine learning tools, libraries and frameworks are also covered. Part 2 details standard machine learning pipelines, with an emphasis on data processing analysis, feature engineering, and modeling. You will learn how to process, wrangle, summarize and visualize data in its various forms. Feature engineering and selection methodologies will be covered in detail with real-world datasets followed by model building, tuning, interpretation and deployment. Part 3 explores multiple real-world case studies spanning diverse domains and industries like retail, transportation, movies, music, marketing, computer vision and finance. For each case study, you will learn the application of various machine learning techniques and methods. The hands-on examples will help you become familiar with state-of-the-art machine learning tools and techniques and understand what algorithms are best suited for any problem. Practical Machine Learning with Python will empower you to start solving your own problems with machine learning today! What You'll Learn Execute end-to-end machine learning projects and systems Implement hands-on examples with industry standard, open source, robust machine learning tools and frameworks Review case studies depicting applications of machine learning and deep learning on diverse domains and industries Apply a wide range of machine learning models including regression, classification, and clustering. Understand and apply the latest models and methodologies from deep learning including CNNs, RNNs, LSTMs and transfer learning. Who This Book Is For IT professionals, analysts, developers, data scientists, engineers, graduate students

Network Science with Python and NetworkX Quick Start Guide Apr 14 2021 Manipulate and analyze network data with the power of Python and NetworkX Key Features Understand the terminology and basic concepts of network science Leverage the power of Python and NetworkX to represent data as a network Apply common techniques for working with network data of varying sizes Book Description NetworkX is a leading free and open source package used for network science with the Python programming language. NetworkX can track properties of individuals and relationships, find communities, analyze resilience, detect key network locations, and perform a wide range of important tasks. With the recent release of version 2, NetworkX has been updated to be more powerful and easy to use. If you're a data scientist, engineer, or computational social scientist, this book will guide you in using the Python programming language to gain insights into real-world networks. Starting with the fundamentals, you'll be introduced to the core concepts of network science, along with examples that use real-world data and Python code. This book will introduce you to theoretical concepts such as scale-free and small-world networks, centrality measures, and agent-based modeling. You'll also be able to look for scale-free networks in real data and visualize a network using circular, directed, and shell layouts. By the end of this book, you'll be able to choose appropriate network representations, use NetworkX to build and characterize networks, and uncover insights while working with real-world systems. What you will learn Use Python and NetworkX to analyze the properties of individuals and relationships Encode data in network nodes and edges using NetworkX Manipulate, store, and summarize data in network nodes and edges Visualize a network using circular, directed and shell layouts Find out how simulating behavior on networks can give insights into real-world problems Understand the ongoing impact of network science on society, and its ethical considerations Who this book is for If you are a programmer or data scientist who wants to manipulate and analyze network data in Python, this book is perfect for you. Although prior knowledge of network science is not necessary, some Python programming experience will help you understand the concepts covered in the book easily.

Mastering OpenCV 4 with Python May 16 2021 Create advanced applications with Python and OpenCV, exploring the potential of facial recognition, machine learning, deep learning, web computing and augmented reality. Key Features Develop your computer vision skills by mastering algorithms in Open Source Computer Vision 4 (OpenCV 4) and Python Apply machine learning and deep learning techniques with TensorFlow and Keras Discover the modern design patterns you should avoid when developing efficient computer vision applications Book Description OpenCV is considered to be one of the best open source computer vision and machine learning software libraries. It helps developers build complete projects in relation to image processing, motion detection, or image segmentation, among many others. OpenCV for Python enables you to run computer vision algorithms smoothly in real time, combining the best of the OpenCV C++ API and the Python language. In this book, you'll get started by setting up OpenCV and delving into the key concepts of computer vision. You'll then proceed to study more advanced concepts and discover the full potential of OpenCV. The book will also introduce you to the creation of advanced applications using Python and OpenCV, enabling you to develop applications that include facial recognition, target tracking, or augmented reality. Next, you'll learn machine learning techniques and concepts, understand how to apply them in real-world examples, and also explore their benefits, including real-time data production and faster data processing. You'll also discover how to translate the functionality provided by OpenCV into optimized application code projects using Python bindings. Toward the concluding chapters, you'll explore the application of artificial intelligence and deep learning techniques using the popular Python libraries TensorFlow, and Keras. By the end of this book, you'll be able to develop advanced computer vision applications to meet your customers' demands. What you will learn Handle files and images, and explore various image processing techniques Explore image transformations, including translation, resizing, and cropping Gain insights into building histograms Brush up on contour detection, filtering, and drawing Work with Augmented Reality to build marker-based and markerless applications Work with the main machine learning algorithms in OpenCV Explore the deep learning Python libraries and OpenCV deep learning capabilities Create computer vision and deep learning web applications Who this book is for This book is designed for computer vision developers, engineers, and researchers who want to develop modern computer vision applications. Basic experience of OpenCV and Python programming is a must.

Program Arcade Games Jan 12 2021 Learn and use Python and PyGame to design and build cool arcade games. In Program Arcade Games: With Python and PyGame, Second Edition, Dr. Paul Vincent Craven teaches you how to create fun and simple quiz games; integrate and start using graphics; animate graphics; integrate and use game controllers; add sound and bit-mapped graphics; and build grid-based games. After reading and using this book, you'll be able to learn to program and build simple arcade game applications using one of today's most popular programming languages, Python. You can even deploy onto Steam and other Linux-based game systems as well as Android, one of today's most popular mobile and tablet platforms. You'll learn: How to create quiz games How to integrate and start using graphics How to animate graphics How to integrate and use game controllers How to add sound and bit-mapped graphics How to build grid-based games Audience "div">This book assumes no prior programming knowledge.

Math Adventures with Python Feb 22 2022 Learn math by getting creative with code! Use the Python programming language to transform learning high school-level math topics like algebra, geometry, trigonometry, and calculus! Math Adventures with Python will show you how to harness the power of programming to keep math relevant and fun. With the aid of the Python programming language, you'll learn how to visualize solutions to a range of math problems as you use code to explore key mathematical concepts like algebra, trigonometry, matrices, and cellular automata. Once you've learned the programming basics like loops and variables, you'll write your own programs to solve equations quickly, make cool things like an interactive rainbow grid, and automate tedious tasks like factoring numbers and finding square roots. You'll learn how to write functions to draw and manipulate shapes, create oscillating sine waves, and solve equations graphically. You'll also learn how to: - Draw and transform 2D and 3D graphics with matrices - Make colorful designs like the Mandelbrot and Julia sets with complex numbers - Use recursion to create fractals like the Koch snowflake and the Sierpinski triangle - Generate virtual sheep that graze on grass and multiply autonomously - Crack secret codes using genetic algorithms As you work through the book's numerous examples and increasingly challenging exercises, you'll code your own solutions, create beautiful visualizations, and see just how much more fun math can be!

Practical Data Science with Python Jan 30 2020 Learn to effectively manage data and execute data science projects from start to finish using Python Key Features Understand and utilize data science tools in Python, such as specialized machine learning algorithms and statistical modeling Build a strong data science foundation with the best data science tools available in Python Add value to yourself, your organization, and society by extracting actionable insights from raw data Book Description Practical Data Science with Python teaches you core data science concepts, with real-world and realistic examples, and strengthens your grip on the basic as well as advanced principles of data preparation and storage, statistics, probability theory, machine learning, and Python programming, helping you build a solid foundation to gain proficiency in data science. The book starts with an overview of basic Python skills and then introduces foundational data science techniques, followed by a thorough explanation of the Python code needed to execute the techniques. You'll understand the code by working through the examples. The code has been broken down into small chunks (a few lines or a function at a time) to enable thorough discussion. As you progress, you will learn how to perform data analysis while exploring the functionalities of key data science Python packages, including pandas, SciPy, and scikit-learn. Finally, the book covers ethics and privacy concerns in data science and suggests resources for improving data science skills, as well as ways to stay up to date on new data science developments. By the end of the book, you should be able to comfortably use Python for basic data science projects and should have the skills to execute the data science process on any data source. What you will learn Use Python data science packages effectively Clean and prepare data for data science work, including feature engineering and feature selection Data modeling, including classic statistical models (such as t-tests), and essential machine learning algorithms, such as random forests and boosted models Evaluate model performance Compare and understand different machine learning methods Interact with Excel spreadsheets through Python Create automated data science reports through Python Get to grips with text analytics techniques Who this book is for The book is intended for beginners, including students starting or about to start a data science, analytics, or related program (e.g. Bachelor's, Master's, bootcamp, online courses), recent college graduates who want to learn new skills to set them apart in the job market, professionals who want to learn hands-on data science techniques in Python, and those who want to shift their career to data science. The book requires basic familiarity with Python. A "getting started with Python" section has been included to get complete novices up to speed.

Python Programming Fundamentals Nov 29 2019 This easy-to-follow and classroom-tested textbook guides the reader through the fundamentals of programming with Python, an accessible language which can be learned incrementally. Features: includes numerous examples and practice exercises throughout the text, with additional exercises, solutions and review questions at the end of each chapter; highlights the patterns which frequently appear when writing programs, reinforcing the application of these patterns for problem-solving through practice exercises; introduces the use of a debugger tool to inspect a program, enabling students to discover for themselves how programs work and enhance their understanding; presents the Tkinter framework for building graphical user interface applications and event-driven programs; provides instructional videos and additional information for students, as well as support materials for instructors, at an associated website.

Deep Learning with Python Jul 30 2022 Discover the practical aspects of implementing deep-learning solutions using the rich Python ecosystem. This book bridges the gap between the academic state-of-the-art and the industry state-of-the-practice by introducing you to deep learning frameworks such as Keras, Theano, and Caffe. The practicalities of these frameworks is often acquired by practitioners by reading source code, manuals, and posing questions on community forums, which tends to be a slow and a painful process. Deep Learning with Python allows you to ramp up to such practical know-how in a short period of time and focus more on the domain, models, and algorithms. This book briefly covers the mathematical prerequisites and fundamentals of deep learning, making this book a good starting point for software developers who want to get started in deep learning. A brief survey of deep learning architectures is also included. Deep Learning with Python also introduces you to key concepts of automatic differentiation and GPU computation which, while not central to deep learning, are critical when it comes to conducting large scale experiments. What You Will Learn Leverage deep learning frameworks in Python namely, Keras, Theano, and Caffe Gain the fundamentals of deep learning with mathematical prerequisites Discover the practical considerations of large scale experiments Take deep learning models to production Who This Book Is For Software developers who want to try out deep learning as a practical solution to a particular problem. Software developers in a data science team who want to take deep learning models developed by data scientists to production.

Introduction to Machine Learning with Python Aug 26 2019 What exactly is machine learning and why is it so valuable in the online business? Are you thinking of learning Python machine learning? This book teaches you the practical ways to do it! Buy the Paperback version and get the Kindle Book versions for FREE! Machine Learning is a branch of AI that applied algorithms to learn from data and create predictions - this is important in predicting the world around us. Python is a popular and open-source programming language. In addition, it is one of the most applied languages in artificial intelligence and other scientific fields. Today, it is a top skill in high demand in the job market. Machine learning has become an integral part of many commercial applications and research projects. Using Python, even as a beginner, this book will teach you practical ways to build your own machine learning solutions. Inside Introduction to Machine Learning with Python, you'll learn: Fundamental concepts and applications of machine learning Understand the various categories of machine learning algorithms. Some of the branches of Artificial Intelligence The basics of Python Concepts of Machine Learning using Python Python Machine Learning Applications Machine Learning Case Studies with Python The way that Python evolved throughout time And many more Throughout the recent years, artificial intelligence and machine learning have made some enormous, significant strides in terms of universal, global applicability. You'll discover the steps required to develop a successful machine-learning application using Python. Introduction to Machine Learning with Python is a step-by-step guide for any person who wants to start learning Artificial Intelligence - It will help you in preparing a solid foundation and learn any other high-level courses. Stay ahead and make a choice that will last... If you like to know more, scroll to the top and select "BUY NOW" button Buy the Paperback version and get the Kindle Book versions for FREE!

Financial Theory with Python Oct 28 2019 Nowadays, finance, mathematics, and programming are intrinsically linked. Financial Theory with Python provides relevant foundations of each discipline to give you the major tools you need to get started in the world of computational finance. Using an approach where mathematical concepts provide the common background against which financial ideas and programming techniques are learned, Financial Theory with Python teaches you the basics of financial economics. Written by the bestselling author of Python for Finance, Yves Hilpisch, this practical guide explains financial, mathematical, and Python programming concepts in an integrative manner so that the interdisciplinary concepts reinforce each other. Draw upon mathematics to learn the foundations of financial theory and Python programming Learn about financial theory, financial data modeling, and the use of Python for computational finance Leverage simple economic models to better understand basic notions of finance and Python programming concepts Utilize both static and dynamic financial modeling to address fundamental problems in finance, such as pricing, decision making, equilibrium, and asset allocation Learn the basics of Python packages useful for financial modeling, such as NumPy, pandas, matplotlib, and SymPy Financial Theory with Python is made available to O'Reilly members in this early release format before it's available to the general public.

Introduction to Machine Learning with Python Dec 03 2022 Machine learning has become an integral part of many commercial applications and research projects, but this field is not exclusive to large companies with extensive research teams. If you use Python, even as a beginner, this book will teach you practical ways to build your own machine learning solutions. With all the data available today, machine learning applications are limited only by your imagination. You'll learn the steps necessary to create a successful machine-learning application with Python and the scikit-learn library. Authors Andreas Müller and Sarah Guido focus on the practical aspects of using machine learning algorithms, rather than the math behind them. Familiarity with the NumPy and matplotlib libraries will help you get even more from this book. With this book, you'll learn: Fundamental concepts and applications of machine learning Advantages and shortcomings of widely used machine learning algorithms How to represent data processed by machine learning, including which data aspects to focus on Advanced methods for model evaluation and parameter tuning The concept of pipelines for chaining models and encapsulating your workflow Methods for working with text data, including text-specific processing techniques Suggestions for improving your machine learning and data science skills

Python in a Nutshell Apr 02 2020 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, Deep Learning Mar 14 2021 Easily Boost Your Skills In Python Programming & Become A Master In Deep Learning & Data Analysis! Python is an interpreted, high-level, general-purpose programming language that emphasizes code readability with its notable use of significant whitespace. What makes Python so popular in the IT industry is that it uses an object-oriented approach, which enables programmers to

write clear, logical code for all types of projects, whether big or small. Hone your Python Programming skills and gain a sharp edge over other programmers the EASIEST way possible... with this practical beginner's guide! In his 3-in-1 Python crash course for beginners, Anthony Adams gives novices like you simple, yet efficient tips and tricks to become a MASTER in Python coding for artificial intelligence, neural networks, machine learning, and data science/analysis! Here's what you'll get: ? Highly innovative ways to boost your understanding of Python programming, data analysis, and machine learning ? Quickly and effectively stop fraud with machine learning ? Practical and efficient exercises that make understanding Python quick & easy And so much more! As a beginner, you might feel a bit intimidated by the complexities of coding. Add the fact that most Python Programming crash course guides make learning harder than it has to be! ? With the help of this 3-in-1 guide, you will be given carefully sequenced Python Programming lessons that'll maximize your understanding, and equip you with all the skills for real-life application! ? Thrive in the IT industry with this comprehensive Python Programming crash course! ? Scroll up, Click on "Buy Now", and Start Learning Today!

Data Visualization with Python and JavaScript Aug 19 2021 Python and Javascript are the perfect complement for turning data into rich, interactive web visualizations, in a world that increasingly expects more than a pre-rendered, static image. Developers need to know how to turn raw, unprocessed data, often "dirty" or malformed, into dynamic, interactive web visualizations. Author Kyran Dale teaches you how to leverage the power of best-of-breed Python and Javascript libraries to do so, using engaging examples and stressing hard-earned best-practice. You'll learn how to: Get data programmatically, using scraping tools or web APIs Clean and process data using Python's heavyweight data-processing libraries Deliver data to a browser using a lightweight Python server (Flask) Receive data and use it to create a web visualization, using D3, Canvas, or WebGL

Real World Instrumentation with Python Jul 06 2020 Learn how to develop your own applications to monitor or control instrumentation hardware. Whether you need to acquire data from a device or automate its functions, this practical book shows you how to use Python's rapid development capabilities to build interfaces that include everything from software to wiring. You get step-by-step instructions, clear examples, and hands-on tips for interfacing a PC to a variety of devices. Use the book's hardware survey to identify the interface type for your particular device, and then follow detailed examples to develop an interface with Python and C. Organized by interface type, data processing activities, and user interface implementations, this book is for anyone who works with instrumentation, robotics, data acquisition, or process control. Understand how to define the scope of an application and determine the algorithms necessary, and why it's important Learn how to use industry-standard interfaces such as RS-232, RS-485, and GPIB Create low-level extension modules in C to interface Python with a variety of hardware and test instruments Explore the console, curses, TkInter, and wxPython for graphical and text-based user interfaces Use open source software tools and libraries to reduce costs and avoid implementing functionality from scratch

The Quick Python Book Dec 31 2019 Introduces the programming language's syntax, control flow, and basic data structures and covers its interaction with applications and management of large collections of code.

The Python Book Mar 26 2022 The Python Book Discover the power of one of the fastest growing programming languages in the world with this insightful new resource The Python Book delivers an essential introductory guide to learning Python for anyone who works with data but does not have experience in programming. The author, an experienced data scientist and Python programmer, shows readers how to use Python for data analysis, exploration, cleaning, and wrangling. Readers will learn what in the Python language is important for data analysis, and why. The Python Book offers readers a thorough and comprehensive introduction to Python that is both simple enough to be ideal for a novice programmer, yet robust to be useful for those more experienced in the language. The book assists budding programmers to gradually increase their skills as they move through the book, always with an understanding of what they are covering and why it is useful. Used by major companies like Google, Facebook, Instagram, Spotify, and more, Python promises to remain central to the programming landscape for years to come. Containing a thorough discussion of Python programming topics like variables, equalities and comparisons, tuple and dictionary data types, while and for loops, and if statements, readers will also learn: How to use highly useful Python programming libraries, including Pandas and Matplotlib How to write Python functions and classes How to write and use Python scripts To deal with different data types within Python Perfect for statisticians, computer scientists, software programmers, and practitioners working in private industry and medicine, The Python Book will also be of interest to students in any of the aforementioned fields. As it assumes no programming experience or knowledge, the book is ideal for those who work with data and want to learn to use Python to enhance their work.

Data Analysis with Python Jun 16 2021 Learn a modern approach to data analysis using Python to harness the power of programming and AI across your data. Detailed case studies bring this modern approach to life across visual data, social media, graph algorithms, and time series analysis. Key Features Bridge your data analysis with the power of programming, complex algorithms, and AI Use Python and its extensive libraries to power your way to new levels of data insight Work with AI algorithms, TensorFlow, graph algorithms, NLP, and financial time series Explore this modern approach across with key industry case studies and hands-on projects Book Description Data Analysis with Python offers a modern approach to data analysis so that you can work with the latest and most powerful Python tools, AI techniques, and open source libraries. Industry expert David Taieb shows you how to bridge data science with the power of programming and algorithms in Python. You'll be working with complex algorithms, and cutting-edge AI in your data analysis. Learn how to analyze data with hands-on examples using Python-based tools and Jupyter Notebook. You'll find the right balance of theory and practice, with extensive code files that you can integrate right into your own data projects. Explore the power of this approach to data analysis by then working with it across key industry case studies. Four fascinating and full projects connect you to the most critical data analysis challenges you're likely to meet in today. The first of these is an image recognition application with TensorFlow – embracing the importance today of AI in your data analysis. The second industry project analyses social media trends, exploring big data issues and AI approaches to natural language processing. The third case study is a financial portfolio analysis application that engages you with time series analysis - pivotal to many data science applications today. The fourth industry use case dives you into graph algorithms and the power of programming in modern data science. You'll wrap up with a thoughtful look at the future of data science and how it will harness the power of algorithms and artificial intelligence. What you will learn A new toolset that has been carefully crafted to meet for your data analysis challenges Full and detailed case studies of the toolset across several of today's key industry contexts Become super productive with a new toolset across Python and Jupyter Notebook Look into the future of data science and which directions to develop your skills next Who this book is for This book is for developers wanting to bridge the gap between them and data scientists. Introducing PixieDust from its creator, the book is a great desk companion for the accomplished Data Scientist. Some fluency in data interpretation and visualization is assumed. It will be helpful to have some knowledge of Python, using Python libraries, and some proficiency in web development.

Automate the Boring Stuff with Python, 2nd Edition Sep 27 2019 Learn how to code while you write programs that effortlessly perform useful feats of automation! The second edition of this international fan favorite includes a brand-new chapter on input validation, Gmail and Google Sheets automations, tips for updating CSV files, and more. If you've ever spent hours renaming files or updating spreadsheet cells, you know how tedious tasks like these can be. But what if you could have your computer do them for you? Automate the Boring Stuff with Python, 2nd Edition teaches even the technically uninclined how to write programs that do in minutes what would take hours to do by hand—no prior coding experience required! This new, fully revised edition of Al Sweigart's bestselling Pythonic classic, Automate the Boring Stuff with Python, covers all the basics of Python 3 while exploring its rich library of modules for performing specific tasks, like scraping data off the Web, filling out forms, renaming files, organizing folders, sending email responses, and merging, splitting, or encrypting PDFs. There's also a brand-new chapter on input validation, tutorials on automating Gmail and Google Sheets, tips on automatically updating CSV files, and other recent feats of automations that improve your efficiency. Detailed, step-by-step instructions walk you through each program, allowing you to create useful tools as you build out your programming skills, 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. Boring tasks no longer have to take to get through—and neither does learning Python!

Learning Scientific Programming with Python Jun 04 2020 This fast-paced introduction to Python moves from the basics to advanced concepts, enabling readers to gain proficiency quickly.

Text Analytics with Python Nov 02 2022 Leverage Natural Language Processing (NLP) in Python and learn how to set up your own robust environment for performing text analytics. This second edition has gone through a major revamp and introduces several significant changes and new topics based on the recent trends in NLP. You'll see how to use the latest state-of-the-art frameworks in NLP, coupled with machine learning and deep learning

models for supervised sentiment analysis powered by Python to solve actual case studies. Start by reviewing Python for NLP fundamentals on strings and text data and move on to engineering representation methods for text data, including both traditional statistical models and newer deep learning-based embedding models. Improved techniques and new methods around parsing and processing text are discussed as well. Text summarization and topic models have been overhauled so the book showcases how to build, tune, and interpret topic models in the context of an interest dataset on NIPS conference papers. Additionally, the book covers text similarity techniques with a real-world example of movie recommenders, along with sentiment analysis using supervised and unsupervised techniques. There is also a chapter dedicated to semantic analysis where you'll see how to build your own named entity recognition (NER) system from scratch. While the overall structure of the book remains the same, the entire code base, modules, and chapters has been updated to the latest Python 3.x release. What You'll Learn • Understand NLP and text syntax, semantics and structure • Discover text cleaning and feature engineering • Review text classification and text clustering • Assess text summarization and topic models • Study deep learning for NLP Who This Book Is For IT professionals, data analysts, developers, linguistic experts, data scientists and engineers and basically anyone with a keen interest in linguistics, analytics and generating insights from textual data.

Begin to Code with Python Aug 31 2022 Become a Python programmer—and have fun doing it! Start writing software that solves real problems, even if you have absolutely no programming experience! This friendly, easy, full-color book puts you in total control of your own learning, empowering you to build unique and useful programs. Microsoft has completely reinvented the beginning programmer's tutorial, reflecting deep research into how today's beginners learn, and why other books fall short. Begin to Code with Python is packed with innovations, from its "Snaps" prebuilt operations to its "Make Something Happen" projects. Whether you're a total beginner or you've tried before, this guide will put the power, excitement, and fun of programming where it belongs: in your hands! Easy, friendly, and you're in control! Learn how to... Get, install, and use powerful free tools to create modern Python programs Learn key concepts from 170 sample programs, and use them to jumpstart your own Discover exactly what happens when a program runs Approach program development with a professional perspective Learn the core elements of the Python language Build more complex software with classes, methods, and objects Organize programs so they're easy to build and improve Capture and respond to user input Store and manipulate many types of real-world data Define custom data types to solve specific problems Create interactive games that are fun to play Build modern web and cloud-based applications Use pre-built libraries to quickly create powerful software Get code samples, including complete apps, at: <https://aka.ms/BegintoCodePython/downloads> About This Book For absolute beginners who've never written a line of code For anyone who's been frustrated with other beginning programming books or courses For people who've started out with other languages and now want to learn Python Works with Windows PC, Apple Mac, Linux PC, or Raspberry Pi Includes mapping of MTA exam objectives that are covered in this book, as well as an appendix with further explanation of some of the topics on the exam

Programming for Computations - Python Dec 23 2021 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.

Automate the Boring Stuff with Python May 28 2022 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 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. Once you've mastered the basics of programming, you'll create Python programs that effortlessly perform useful and impressive 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 reminder emails and text notifications Fill out online forms Step-by-step instructions walk you through each program, and 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. Note: The programs in this book are written to run on Python 3.

Derivatives Analytics with Python Aug 07 2020 Supercharge options analytics and hedging using the power of Python Derivatives Analytics with Python shows you how to implement market-consistent valuation and hedging approaches using advanced financial models, efficient numerical techniques, and the powerful capabilities of the Python programming language. This unique guide offers detailed explanations of all theory, methods, and processes, giving you the background and tools necessary to value stock index options from a sound foundation. You'll find and use self-contained Python scripts and modules and learn how to apply Python to advanced data and derivatives analytics as you benefit from the 5,000+ lines of code that are provided to help you reproduce the results and graphics presented. Coverage includes market data analysis, risk-neutral valuation, Monte Carlo simulation, model calibration, valuation, and dynamic hedging, with models that exhibit stochastic volatility, jump components, stochastic short rates, and more. The companion website features all code and IPython Notebooks for immediate execution and automation. Python is gaining ground in the derivatives analytics space, allowing institutions to quickly and efficiently deliver portfolio, trading, and risk management results. This book is the finance professional's guide to exploiting Python's capabilities for efficient and performing derivatives analytics. Reproduce major stylized facts of equity and options markets yourself Apply Fourier transform techniques and advanced Monte Carlo pricing Calibrate advanced option pricing models to market data Integrate advanced models and numeric methods to dynamically hedge options Recent developments in the Python ecosystem enable analysts to implement analytics tasks as performing as with C or C++, but using only about one-tenth of the code or even less. Derivatives Analytics with Python — Data Analysis, Models, Simulation, Calibration and Hedging shows you what you need to know to supercharge your derivatives and risk analytics efforts.

Data Wrangling with Python May 04 2020 How do you take your data analysis skills beyond Excel to the next level? By learning just enough Python to get stuff done. This hands-on guide shows non-programmers like you how to process information that's initially too messy or difficult to access. You don't need to know a thing about the Python programming language to get started. Through various step-by-step exercises, you'll learn how to acquire, clean, analyze, and present data efficiently. You'll also discover how to automate your data process, schedule file- editing and clean-up tasks, process larger datasets, and create compelling stories with data you obtain. Quickly learn basic Python syntax, data types, and language concepts Work with both machine-readable and human-consumable data Scrape websites and APIs to find a bounty of useful information Clean and format data to eliminate duplicates and errors in your datasets Learn when to standardize data and when to test and script data cleanup Explore and analyze your datasets with new Python libraries and techniques Use Python solutions to automate your entire data-wrangling process

Practical Machine Learning with Python Nov 21 2021 Master the essential skills needed to recognize and solve complex problems with machine learning and deep learning. Using real-world examples that leverage the popular Python machine learning ecosystem, this book is your perfect companion for learning the art and science of machine learning to become a successful practitioner. The concepts, techniques, tools, frameworks, and methodologies used in this book will teach you how to think, design, build, and execute machine learning systems and projects successfully. Practical Machine Learning with Python follows a structured and comprehensive three-tiered approach packed with hands-on examples and code. Part 1 focuses on understanding machine learning concepts and tools. This includes machine learning basics with a broad overview of algorithms, techniques, concepts and applications, followed by a tour of the entire Python machine learning ecosystem. Brief guides for useful machine learning tools, libraries and frameworks are also covered. Part 2 details standard machine learning pipelines, with an emphasis on data processing analysis, feature engineering, and modeling. You will learn how to process, wrangle, summarize and visualize data in its various forms. Feature engineering and selection methodologies will be covered in detail with real-world datasets followed by model building, tuning, interpretation and deployment. Part 3 explores multiple real-world case studies spanning diverse domains and industries like retail, transportation, movies, music, marketing, computer vision and finance. For each case study, you will learn the application of various machine learning techniques and methods. The hands-on examples will help you become familiar with state-of-the-art machine learning tools and techniques and understand what algorithms are best suited for any problem. Practical Machine Learning with Python will empower you to start solving your own problems with machine learning today! What You'll Learn

Execute end-to-end machine learning projects and systems Implement hands-on examples with industry standard, open source, robust machine learning tools and frameworks Review case studies depicting applications of machine learning and deep learning on diverse domains and industries Apply a wide range of machine learning models including regression, classification, and clustering. Understand and apply the latest models and methodologies from deep learning including CNNs, RNNs, LSTMs and transfer learning. Who This Book Is For IT professionals, analysts, developers, data scientists, engineers, graduate students

Artificial Intelligence with Python Jul 18 2021 Build real-world AI applications with Python to intelligently interact with your surroundings About This Book* Step into the amazing world of intelligent apps using this comprehensive guide* Enter the world of AI, explore it, and become independent to create your own AI apps* Work through simple yet insightful examples that will get you up and running with artificial intelligence in no time Who This Book Is For This book is for Python developers who want to build real-world AI applications. This book is friendly to Python beginners, but being familiar with Python would be useful to play around with the code. It will also be useful for experienced Python programmers who are looking to implement AI techniques in their existing technology stacks. What You Will Learn* Find out how to use different classification and regression techniques* Understand the concept of clustering and how to use it to automatically segment data* See how to build an intelligent recommender system* Understand logic programming and how to use it* Develop automatic speech recognition systems* Understand the basics of heuristic search and genetic programming* Develop an understanding of reinforcement learning* Discover how to build AI applications centered on images, text, and time series data* Understand how to use deep learning algorithms and build applications based on it In Detail AI is becoming increasingly relevant in the modern world where the ecosystem is driven by technology and data. AI is used extensively across many fields such as robotics, computer vision, finance, and so on. We will explore various real-world scenarios in this book and you'll learn about various AI algorithms that can be used to build various applications. During the course of this book, you will find out how to make informed decisions about what algorithms to use in a given context. Starting from the basics of the AI concepts, you will learn how to develop the various building blocks of AI using different data mining techniques. You will see how to implement different algorithms to get the best possible results, and will understand how to apply them to real-world scenarios. If you want to add an intelligence layer to any application based on images, text, stock market, or some other form of data, this exciting book on AI will definitely guide you all the way!

Cracking Codes with Python Oct 01 2022 Learn how to program in Python while making and breaking ciphers—algorithms used to create and send secret messages! After a crash course in Python programming basics, you'll learn to make, test, and hack programs that encrypt text with classical ciphers like the transposition cipher and Vigenère cipher. You'll begin with simple programs for the reverse and Caesar ciphers and then work your way up to public key cryptography, the type of encryption used to secure today's online transactions, including digital signatures, email, and Bitcoin. Each program includes the full code and a line-by-line explanation of how things work. By the end of the book, you'll have learned how to code in Python and you'll have the clever programs to prove it! You'll also learn how to: - Combine loops, variables, and flow control statements into real working programs - Use dictionary files to instantly detect whether decrypted messages are valid English or gibberish - Create test programs to make sure that your code encrypts and decrypts correctly - Code (and hack!) a working example of the affine cipher, which uses modular arithmetic to encrypt a message - Break ciphers with techniques such as brute-force and frequency analysis There's no better way to learn to code than to play with real programs. Cracking Codes with Python makes the learning fun!

Data Science with Python and Dask Oct 21 2021 Summary Dask is a native parallel analytics tool designed to integrate seamlessly with the libraries you're already using, including Pandas, NumPy, and Scikit-Learn. With Dask you can crunch and work with huge datasets, using the tools you already have. And Data Science with Python and Dask is your guide to using Dask for your data projects without changing the way you work! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. You'll find registration instructions inside the print book. About the Technology An efficient data pipeline means everything for the success of a data science project. Dask is a flexible library for parallel computing in Python that makes it easy to build intuitive workflows for ingesting and analyzing large, distributed datasets. Dask provides dynamic task scheduling and parallel collections that extend the functionality of NumPy, Pandas, and Scikit-learn, enabling users to scale their code from a single laptop to a cluster of hundreds of machines with ease. About the Book Data Science with Python and Dask teaches you to build scalable projects that can handle massive datasets. After meeting the Dask framework, you'll analyze data in the NYC Parking Ticket database and use DataFrames to streamline your process. Then, you'll create machine learning models using Dask-ML, build interactive visualizations, and build clusters using AWS and Docker. What's inside Working with large, structured and unstructured datasets Visualization with Seaborn and Datashader Implementing your own algorithms Building distributed apps with Dask Distributed Packaging and deploying Dask apps About the Reader For data scientists and developers with experience using Python and the PyData stack. About the Author Jesse Daniel is an experienced Python developer. He taught Python for Data Science at the University of Denver and leads a team of data scientists at a Denver-based media technology company. Table of Contents PART 1 - The Building Blocks of scalable computing Why scalable computing matters Introducing Dask PART 2 - Working with Structured Data using Dask DataFrames Introducing Dask DataFrames Loading data into DataFrames Cleaning and transforming DataFrames Summarizing and analyzing DataFrames Visualizing DataFrames with Seaborn Visualizing location data with Datashader PART 3 - Extending and deploying Dask Working with Bags and Arrays Machine learning with Dask-ML Scaling and deploying Dask

Automate the Boring Stuff with Python, 2nd Edition Jan 04 2023 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.

Getting Started with Python and Raspberry Pi Sep 07 2020 Learn to design and implement reliable Python applications on the Raspberry Pi using a range of external libraries, the Raspberry Pi's GPIO port, and the camera module About This Book Learn the fundamentals of Python scripting and application programming Design user-friendly command-line and graphical user interfaces A step-by-step guide to learning Python programming with the Pi Who This Book Is For This book is designed for those who are unfamiliar with the art of Python development and want to get to know their way round the language and the many additional libraries that allow you to get a full application up and running in no time. What You Will Learn Fundamentals of Python applications Designing applications for multi-threading Interacting with electronics and physical devices Debugging applications when they go wrong Packaging and installing Python modules User interface design using Qt Building easy to use command-line interfaces Connecting applications to the Internet In Detail The Raspberry Pi is one of the smallest and most affordable single board computers that has taken over the world of hobby electronics and programming, and the Python programming language makes this the perfect platform to start coding with. The book will start with a brief introduction to Raspberry Pi and Python. We will direct you to the official documentation that helps you set up your Raspberry Pi with the necessary equipment such as the monitor, keyboard, mouse, power supply, and so on. It will then dive right into the basics of Python programming. Later, it will focus on other Python tasks, for instance, interfacing with hardware, GUI programming, and more. Once you get well versed with the basic programming, the book will then teach you to develop Python/Raspberry Pi applications. By the end of this book, you will be able to develop Raspberry Pi applications with Python and will have good understanding of Python programming for Raspberry Pi. Style and approach An

easy-to-follow introduction to Python scripting and application development through clear conceptual explanations backed up by real-world examples on the Raspberry Pi.

Invent Your Own Computer Games with Python, 4th Edition Apr 26 2022 Invent Your Own Computer Games with Python will teach you how to make computer games using the popular Python programming language—even if you've never programmed before! Begin by building classic games like Hangman, Guess the Number, and Tic-Tac-Toe, and then work your way up to more advanced games, like a text-based treasure hunting game and an animated collision-dodging game with sound effects. Along the way, you'll learn key programming and math concepts that will help you take your game programming to the next level. Learn how to: –Combine loops, variables, and flow control statements into real working programs –Choose the right data structures for the job, such as lists, dictionaries, and tuples –Add graphics and animation to your games with the pygame module –Handle keyboard and mouse input –Program simple artificial intelligence so you can play against the computer –Use cryptography to convert text messages into secret code –Debug your programs and find common errors As you work through each game, you'll build a solid foundation in Python and an understanding of computer science fundamentals. What new game will you create with the power of Python? The projects in this book are compatible with Python 3.

introduction-to-machine-learning-with-python-a-guide-for-data-scientists *Bookmark File asset.winnetnews.com on February 5, 2023 Pdf For Free*