

Python For Data Science Web And Core Uci Division Of

Here's the Perfect Solution if You Want to Become the Master of Data Science and Learn Python Step-by-Step Would you like to: Learn a super competitive skill? Become irreplaceable in the future job market? Upgrade yourself to the ultimate data whizz? If so, then keep reading! Data science is one of the emerging technologies that is set to radically transform the job market. With applications in almost every industry, data science experts will have no shortage of great job offers. But, the whole field may seem a little intimidating if your background is not specific to data science. This book is here to guide you through the field of data science from the very beginning. You will learn the fundamental skills and tools to support your learning process. If you're a beginner, this is the book to help you easily understand the basics of data science. To understand data science, you also need a good understanding of how Python helps you design and implement these projects. This guidebook is going to explain how we can get all of this done. Here just a little preview of what you'll find inside this book: A thorough and simple explanation of data science and the way it works Basics of data science and fundamental skills you need to get started Data science libraries you need to learn to become a data whizz A blueprint for the most used frameworks for Python data science How to process and understand the data and design your own projects AND SO MUCH MORE! Even if you're an absolute beginner with little programming experience, you will find this book easy to follow and implement. This guide is your first step towards a successful data science career, so don't hesitate! Scroll Up, Click the "Buy Now with 1-Click", and Get Your Copy!

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

Learn web scraping and crawling techniques to access unlimited data from any web source in any format. With this practical guide, you'll learn how to use Python scripts and web APIs to gather and process data from thousands—or even millions—of web pages at once. Ideal for programmers, security professionals, and web administrators familiar with Python, this book not only teaches basic web scraping mechanics, but also delves into more advanced topics, such as analyzing raw data or using scrapers for frontend website testing. Code samples are available to help you understand the concepts in practice. Learn how to parse complicated HTML pages Traverse multiple pages and sites Get a general overview of APIs and how they work Learn several methods for storing the data you scrape Download, read, and extract data from documents Use tools and techniques to clean badly formatted data Read and write natural languages Crawl through forms and logins Understand how to scrape JavaScript Learn image processing and text recognition

This textbook grew out of notes for the ECE143 Programming for Data Analysis class that the author has been teaching at University of California, San Diego, which is a requirement for both graduate and undergraduate degrees in Machine Learning and Data Science. This book is ideal for readers with some Python programming experience. The book covers key language concepts that must be understood to program effectively, especially for data analysis applications. Certain low-level language features are discussed in detail, especially Python memory management and data structures. Using Python effectively means taking advantage of its vast ecosystem. The book discusses Python package management and how to use third-party modules as well as how to structure your own Python modules. The section on object-oriented programming explains features of the language that facilitate common programming patterns. After developing the key Python language features, the book moves on to third-party modules that are foundational for effective data analysis, starting with Numpy. The book develops key Numpy concepts and discusses internal Numpy array data structures and memory usage. Then, the author moves onto Pandas and details its many features for data processing and alignment. Because strong visualizations are important for communicating data analysis, key modules such as Matplotlib are developed in detail, along with web-based options such as Bokeh, Holoviews, Altair, and Plotly. The text is sprinkled with many tricks-of-the-trade that help avoid common pitfalls. The author explains the internal logic embodied in the Python language so that readers can get into the Python mindset and make better design choices in their codes, which is especially helpful for newcomers to both Python and data analysis. To get the most out of this book, open a Python interpreter and type along with the many code samples.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. This up-to-the-minute reference will help you master all three facets of sports analytics — and use it to win! Sports Analytics and Data Science is the most accessible and practical guide to sports analytics for everyone who cares about winning and everyone who is interested in data science. You'll discover how successful sports analytics blends business and sports savvy, modern information technology, and sophisticated modeling techniques. You'll master the discipline through realistic sports vignettes and intuitive data visualizations—not complex math. Every chapter focuses on one key sports analytics application. Miller guides you through assessing players and teams, predicting scores and making game-day decisions, crafting brands and marketing messages, increasing revenue and profitability, and much more. Step by step, you'll learn how analysts transform raw data and analytical models into wins: both on the field and in any sports business.

Get Started with Web Scraping using Python! Congratulations! By picking up this book, you've set the first steps into the exciting world of web scraping. For those who are not familiar with programming or the deeper workings of the web, web scraping often looks like a black art: the ability to write a program that sets off on its own to explore the Internet and collect data is seen as a magical and exciting ability to possess. In this book, we set out to provide a concise and modern guide to web scraping, using Python as our programming language, without glossing over important details or best practices. In addition, this book is written with a data science audience in mind. We're data scientists ourselves, and have very often found web scraping to be a powerful tool to have in your arsenal, as many data science projects start with the first step of obtaining an appropriate data set, so why not utilize the treasure trove of information the web provides. As such, we've strived to offer a guide that: Is concise and to the point, whilst also being thorough Is geared towards data scientists: we'll show you how web scraping fits into the data science workflow Takes a "code first" approach to get you up to speed quickly without too much boilerplate text Is modern by using well-established best practices and Python packages only Shows how to handle the web of today, including JavaScript, cookies, and common web scraping mitigation techniques Includes a thorough managerial and legal discussion regarding web scraping Provides lots of pointers for further reading and learning Includes many larger, fully worked out examples Chapter Overview Nine chapters are included in this book. In Chapter 1, we provide a brief overview on web scraping and real-life use cases and make sure your Python environment is set up correctly. In Chapter 2, you'll learn the basics regarding HTTP, the core piece of technology behind the web, and the requests Python library. In Chapter 3, we start working with HTML and CSS sites, using the BeautifulSoup library. Chapter 4

returns to HTTP, exploring it more detail. Chapter 5 introduces the Selenium library, which you'll use to scrape JavaScript-heavy websites. Chapter 6 explains web crawling in detail. In Chapter 7, an in-depth discussion regarding managerial and legal concerns is provided. Chapter 8 recaps best practices and provides pointers to other tools. Chapter 9 includes fourteen, fully worked out web scraping examples bringing everything you've learned together, and illustrates various interesting data science oriented use cases.

Are you looking for a super-fast computer programming course? ? Do you want to learn Python Programming Language to implement your own Data Analysis solution but you don't know how to start? ? Would you like to improve your business? ? Then keep reading! Python Data Science will introduce you into Python and to the world of data science, machine learning and artificial intelligence. You will also learn the smartest tricks for code-writing. The following list is just a tiny fraction of what you will learn: ? The basics of Python programming ? Differences among programming languages: Vba, SQL, R, Python ? 4 reasons why Python is fundamental for Data Science ? Introduction to some Python libraries like NumPy, Pandas, Matplotlib, ? Python design patterns ? Fit Python Data Analysis to your business ? Optimal tools and techniques for data visualization ? Analysis of popular Python projects templates ? Game creation with Python Examples and step-by-step exercises will guide you during the code-writing learning process. These notions will be provided at an extent useful for both academic or industrial implementation. Even if you are new in code writing, you will quickly grasp the basics thanks to visual charts and guidelines. Therefore, if you really wish to explore the world of python data science, learn and master its language, please click buy now!

Are you looking for a crash course that will help you learn Python? Do you want to master data science using Python? If yes, then keep reading! Python is one of the most popular programming languages in the world in 2020 and specially for data science. Every day people use it to do cool things like Automation, they use it in Artificial Intelligence, Machine Learning, as well as Building Applications and Websites like Instagram and Dropbox. YouTube, Pinterest, and SurveyMonkey are all built on Python. So if you are looking for a trendy job, like data scientist, Python is for you. This is a Python guide with 2 Books in 1: Python crash course Python for data analysis Python has seen an explosion in popularity in recent years, driven by several aspects that make it an incredibly versatile and intuitive language. Moreover, data analysis plays a significant job in numerous parts of your regular day to day existence today. Organizations use information to Understand Their Customer Needs and produce the Best Possible Product or Service. Python Programming Language is one of the best framework with regards to information examination. Data Scientist is the most requested job of the 21st century and Python is the most popular programming language of the 21st century. So it's pretty obvious that anyone have skills in both Data Science and Python will be in great demand in industry. You needn't bother with an exhausting and costly reading material. This guide is the best one for every readers. This guide covers: The world of data science technologies Application of machine learning Data scientist: the sexiest job in the 21st century Learning Python from scratch Data analysis with Python NumPy for numerical data processing Data visualization with Python Projects on Python And much more! Despite its simplicity, Python is also sturdy and robust enough to carry out complex scientific and mathematical tasks. Python has been designed with features that drastically simplify the visualization and analysis of data, and Python is also the go-to choice for the creation of machine learning models and artificial intelligence. Be it machine learning, data analytics, data processing, web development, enterprise software development or taking the photo of Blackhole: Python is everywhere. Beloved by the data scientists and new generation developers, Python will eat the word! Ready to get started? Click the BUY NOW button!

Data Science Bookcamp is a comprehensive set of challenging projects carefully designed to grow your data science skills from novice to master. Learn data science with Python by building five real-world projects! In Data Science Bookcamp you'll test and build your knowledge of Python and learn to handle the kind of open-ended problems that professional data scientists work on daily. Data Science Bookcamp is a comprehensive set of challenging projects carefully designed to grow your data science skills from novice to master. Veteran data scientist Leonard Apeltsin sets five increasingly difficult exercises that test your abilities against the kind of problems you'd encounter in the real world. As you solve each challenge, you'll acquire and expand the data science and Python skills you'll use as a professional data scientist. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. This book provides a comprehensive yet short description of the basic concepts of Complex Network theory. In contrast to other books the authors present these concepts through real case studies. The application topics span from Foodwebs, to the Internet, the World Wide Web and the Social Networks, passing through the International Trade Web and Financial time series. The final part is devoted to definition and implementation of the most important network models. The text provides information on the structure of the data and on the quality of available datasets. Furthermore it provides a series of codes to allow immediate implementation of what is theoretically described in the book. Readers already used to the concepts introduced in this book can learn the art of coding in Python by using the online material. To this purpose the authors have set up a dedicated web site where readers can download and test the codes. The whole project is aimed as a learning tool for scientists and practitioners, enabling them to begin working instantly in the field of Complex Networks.

Leverage the power of the Python data science libraries and advanced machine learning techniques to analyse large unstructured datasets and predict the occurrence of a particular future event. Key Features Explore the depths of data science, from data collection through to visualization Learn pandas, scikit-learn, and Matplotlib in detail Study various data science algorithms using real-world datasets Book Description Data Science with Python begins by introducing you to data science and teaches you to install the packages you need to create a data science coding environment. You will learn three major techniques in machine learning: unsupervised learning, supervised learning, and reinforcement learning. You will also explore basic classification and regression techniques, such as support vector machines, decision trees, and logistic regression. As you make your way through chapters, you will study the basic functions, data structures, and syntax of the Python language that are used to handle large datasets with ease. You will learn about NumPy and pandas libraries for matrix calculations and data manipulation, study how to use Matplotlib to create highly customizable visualizations, and apply the boosting algorithm XGBoost to make predictions. In the concluding chapters, you will explore convolutional neural networks (CNNs), deep learning algorithms used to predict what is in an image. You will also understand how to feed human sentences to a neural network, make the model process contextual information, and create human language processing systems to predict the outcome. By the end of this book, you will be able to understand and implement any new data science algorithm and have the confidence to experiment with tools or libraries other than those covered in the book. What you will learn Pre-process data to make it ready to use for machine learning Create data visualizations with Matplotlib Use scikit-learn to perform dimension reduction using principal component analysis (PCA) Solve classification and regression problems Get predictions using the XGBoost library Process images and create machine learning models to decode them Process human language for prediction and classification Use TensorBoard to monitor training metrics in real time Find the best hyperparameters for your model with AutoML Who this book is for Data Science with Python is designed for data analysts, data scientists, database engineers, and business analysts who want to move towards using Python and machine learning techniques to analyze data and predict outcomes. Basic knowledge of Python and data analytics will prove beneficial to understand the various concepts explained through this book.

Master modern web and network data modeling: both theory and applications. In *Web and Network Data Science*, a top faculty member of Northwestern University's prestigious analytics program presents the first fully-integrated treatment of both the business and academic elements of web and network modeling for predictive analytics. Some books in this field focus either entirely on business issues (e.g., Google Analytics and SEO); others are strictly academic (covering topics such as sociology, complexity theory, ecology, applied physics, and economics). This text gives today's managers and students what they really need: integrated coverage of concepts, principles, and theory in the context of real-world applications. Building on his pioneering *Web Analytics* course at Northwestern University, Thomas W. Miller covers usability testing, Web site performance, usage analysis, social media platforms, search engine optimization (SEO), and many other topics. He balances this practical coverage with accessible and up-to-date introductions to both social network analysis and network science, demonstrating how these disciplines can be used to solve real business problems.

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

Now , a leader of Northwestern University's prestigious analytics program presents a fully-integrated treatment of both the business and academic elements of marketing applications in predictive analytics. Writing for both managers and students, Thomas W. Miller explains essential concepts, principles, and theory in the context of real-world applications. Building on Miller's pioneering program, *Marketing Data Science* thoroughly addresses segmentation, target marketing, brand and product positioning, new product development, choice modeling, recommender systems, pricing research, retail site selection, demand estimation, sales forecasting, customer retention, and lifetime value analysis. Starting where Miller's widely-praised *Modeling Techniques in Predictive Analytics* left off, he integrates crucial information and insights that were previously segregated in texts on web analytics, network science, information technology, and programming. Coverage includes: The role of analytics in delivering effective messages on the web Understanding the web by understanding its hidden structures Being recognized on the web - and watching your own competitors Visualizing networks and understanding communities within them Measuring sentiment and making recommendations Leveraging key data science methods: databases/data preparation, classical/Bayesian statistics, regression/classification, machine learning, and text analytics Six complete case studies address exceptionally relevant issues such as: separating legitimate email from spam; identifying legally-relevant information for lawsuit discovery; gleaning insights from anonymous web surfing data, and more. This text's extensive set of web and network problems draw on rich public-domain data sources; many are accompanied by solutions in Python and/or R. *Marketing Data Science* will be an invaluable resource for all students, faculty, and professional marketers who want to use business analytics to improve marketing performance.

Understand the constructs of the Python programming language and use them to build data science projects Key Features Learn the basics of developing applications with Python and deploy your first data application Take your first steps in Python programming by understanding and using data structures, variables, and loops Delve into Jupyter, NumPy, Pandas, SciPy, and sklearn to explore the data science ecosystem in Python Book Description Python is the most widely used programming language for building data science applications. Complete with step-by-step instructions, this book contains easy-to-follow tutorials to help you learn Python and develop real-world data science projects. The “secret sauce” of the book is its curated list of topics and solutions, put together using a range of real-world projects, covering initial data collection, data analysis, and production. This Python book starts by taking you through the basics of programming, right from variables and data types to classes and functions. You'll learn how to write idiomatic code and test and debug it, and discover how you can create packages or use the range of built-in ones. You'll also be introduced to the extensive ecosystem of Python data science packages, including NumPy, Pandas, scikit-learn, Altair, and Datashader. Furthermore, you'll be able to perform data analysis, train models, and interpret and communicate the results. Finally, you'll get to grips with structuring and scheduling scripts using Luigi and sharing your machine learning models with the world as a microservice. By the end of the book, you'll have learned not only how to implement Python in data science projects, but also how to maintain and design them to meet high programming standards. What you will learn Code in Python using Jupyter and VS Code Explore the basics of coding – loops, variables, functions, and classes Deploy continuous integration with Git, Bash, and DVC Get to grips with Pandas, NumPy, and scikit-learn Perform data visualization with Matplotlib, Altair, and Datashader Create a package out of your code using poetry and test it with PyTest Make your machine learning model accessible to anyone with the web API Who this book is for If you want to learn Python or data science in a fun and engaging way, this book is for you. You'll also find this book useful if you're a high school student, researcher, analyst, or anyone with little or no coding experience with an interest in the subject and courage to learn, fail, and learn from failing. A basic understanding of how computers work will be useful.

"This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous programming experience"--

Learn the fundamentals of Python (3.7) and how to apply it to data science, programming, and web development. Fully updated to include hands-on tutorials and projects. Key Features Learn the fundamentals of Python programming with interactive projects Apply Python to data science with tools such as IPython and Jupyter Utilize Python for web development and build a real-world app using Django Book Description Learn Python Programming is a quick, thorough, and practical introduction to Python - an extremely flexible and powerful programming language that can be applied to many disciplines. Unlike other books, it doesn't bore you with elaborate explanations of the basics but gets you up-and-running, using the language. You will begin by learning the fundamentals of Python so that you have a rock-solid foundation to build upon. You will explore the foundations of Python programming and learn how Python can be manipulated

to achieve results. Explore different programming paradigms and find the best approach to a situation; understand how to carry out performance optimization and effective debugging; control the flow of a program; and utilize an interchange format to exchange data. You'll also walk through cryptographic services in Python and understand secure tokens. Learn Python Programming will give you a thorough understanding of the Python language. You'll learn how to write programs, build websites, and work with data by harnessing Python's renowned data science libraries. Filled with real-world examples and projects, the book covers various types of applications, and concludes by building real-world projects based on the concepts you have learned. What you will learn Get Python up and running on Windows, Mac, and Linux Explore fundamental concepts of coding using data structures and control flow Write elegant, reusable, and efficient code in any situation Understand when to use the functional or OOP approach Cover the basics of security and concurrent/asynchronous programming Create bulletproof, reliable software by writing tests Build a simple website in Django Fetch, clean, and manipulate data Who this book is for Learn Python Programming is for individuals with relatively little experience in coding or Python. It's also ideal for aspiring programmers who need to write scripts or programs to accomplish tasks. The book shows you how to create a full-fledged application.

Unleash the power of Python for your data analysis projects with For Dummies! Python is the preferred programming language for data scientists and combines the best features of Matlab, Mathematica, and R into libraries specific to data analysis and visualization. Python for Data Science For Dummies shows you how to take advantage of Python programming to acquire, organize, process, and analyze large amounts of information and use basic statistics concepts to identify trends and patterns. You'll get familiar with the Python development environment, manipulate data, design compelling visualizations, and solve scientific computing challenges as you work your way through this user-friendly guide. Covers the fundamentals of Python data analysis programming and statistics to help you build a solid foundation in data science concepts like probability, random distributions, hypothesis testing, and regression models Explains objects, functions, modules, and libraries and their role in data analysis Walks you through some of the most widely-used libraries, including NumPy, SciPy, BeautifulSoup, Pandas, and Matplotlib Whether you're new to data analysis or just new to Python, Python for Data Science For Dummies is your practical guide to getting a grip on data overload and doing interesting things with the oodles of information you uncover.

This book provides a complete and modern guide to web scraping, using Python as the programming language, without glossing over important details or best practices. Written with a data science audience in mind, the book explores both scraping and the larger context of web technologies in which it operates, to ensure full understanding. The authors recommend web scraping as a powerful tool for any data scientist's arsenal, as many data science projects start by obtaining an appropriate data set. Starting with a brief overview on scraping and real-life use cases, the authors explore the core concepts of HTTP, HTML, and CSS to provide a solid foundation. Along with a quick Python primer, they cover Selenium for JavaScript-heavy sites, and web crawling in detail. The book finishes with a recap of best practices and a collection of examples that bring together everything you've learned and illustrate various data science use cases. What You'll Learn Leverage well-established best practices and commonly-used Python packages Handle today's web, including JavaScript, cookies, and common web scraping mitigation techniques Understand the managerial and legal concerns regarding web scraping Who This Book is For A data science oriented audience that is probably already familiar with Python or another programming language or analytical toolkit (R, SAS, SPSS, etc). Students or instructors in university courses may also benefit. Readers unfamiliar with Python will appreciate a quick Python primer in chapter 1 to catch up with the basics and provide pointers to other guides as well.

More than just a Python guide for beginners, The Python Workshop takes you through the full spectrum of basic to advanced topics, equipping you with the skills you need to get started with data science and more. Filled with practical step-by-step examples and interactive exercises, you'll learn by doing as you grow your new Python skillset.

The fast and easy way to learn Python programming and statistics Python is a general-purpose programming language created in the late 1980s—and named after Monty Python—that's used by thousands of people to do things from testing microchips at Intel, to powering Instagram, to building video games with the PyGame library. Python For Data Science For Dummies is written for people who are new to data analysis, and discusses the basics of Python data analysis programming and statistics. The book also discusses Google Colab, which makes it possible to write Python code in the cloud. Get started with data science and Python Visualize information Wrangle data Learn from data The book provides the statistical background needed to get started in data science programming, including probability, random distributions, hypothesis testing, confidence intervals, and building regression models for prediction.

Are you thinking about learning how to use the Python programming language? Thinking about getting started on a programming career? Are you thinking about learning data science? This book is for you!

Become an efficient data science practitioner by understanding Python's key concepts About This Book Quickly get familiar with data science using Python 3.5 Save time (and effort) with all the essential tools explained Create effective data science projects and avoid common pitfalls with the help of examples and hints dictated by experience Who This Book Is For If you are an aspiring data scientist and you have at least a working knowledge of data analysis and Python, this book will get you started in data science. Data analysts with experience of R or MATLAB will also find the book to be a comprehensive reference to enhance their data manipulation and machine learning skills. What You Will Learn Set up your data science toolbox using a Python scientific environment on Windows, Mac, and Linux Get data ready for your data science project Manipulate, fix, and explore data in order to solve data science problems Set up an experimental pipeline to test your data science hypotheses Choose the most effective and scalable learning algorithm for your data science tasks Optimize your machine learning models to get the best performance Explore and cluster graphs, taking advantage of interconnections and links in your data In Detail Fully expanded and upgraded, the second edition of Python Data Science Essentials takes you through all you need to know to succeed in data science using Python. Get modern insight into the core of Python data, including the latest versions of Jupyter notebooks, NumPy, pandas and scikit-learn. Look beyond the fundamentals with beautiful data visualizations with Seaborn and ggplot, web development with Bottle, and even the new frontiers of deep learning with Theano and TensorFlow. Dive into building your essential Python 3.5 data science toolbox, using a single-source approach that will allow to to work with Python 2.7 as well. Get to grips fast with data munging and preprocessing, and all the techniques you need to load, analyse, and process your data. Finally, get a complete overview of principal machine learning algorithms, graph analysis techniques, and all the visualization and deployment instruments that make it easier to present your results to an audience of both data science

experts and business users. Style and approach The book is structured as a data science project. You will always benefit from clear code and simplified examples to help you understand the underlying mechanics and real-world datasets.

Are you thinking about learning how to use the Python programming language? Thinking about getting started on a programming career? Python is one of the easiest computer programming languages to learn and use, with simple syntax and easy rules to follow. While it is aimed at beginners to Python coding, this book can also be used as a reference for those with a little more experience who want to brush up on their skills. The codes are also written in a way that you can change the values to see how different things work. Once you have mastered this guide, you can move seamlessly onto more experienced topics but I cannot stress enough the importance of practicing the codes regularly. Here's what you will learn: Python Datatypes Python Strings Python Lists Python Tuples Python Conditionals Python Dictionaries Python For Loops Python While Loops Python Break & Continue Statements Python Functions Python Classes Don't waste any more time. Scroll up, click on Buy Now, and get started on your Python programming journey!

Build the foundational data science skills necessary to work with and better understand complex data science algorithms. This example-driven book provides complete Python coding examples to complement and clarify data science concepts, and enrich the learning experience. Coding examples include visualizations whenever appropriate. The book is a necessary precursor to applying and implementing machine learning algorithms. The book is self-contained. All of the math, statistics, stochastic, and programming skills required to master the content are covered. In-depth knowledge of object-oriented programming isn't required because complete examples are provided and explained. Data Science Fundamentals with Python and MongoDB is an excellent starting point for those interested in pursuing a career in data science. Like any science, the fundamentals of data science are a prerequisite to competency. Without proficiency in mathematics, statistics, data manipulation, and coding, the path to success is "rocky" at best. The coding examples in this book are concise, accurate, and complete, and perfectly complement the data science concepts introduced. What You'll Learn Prepare for a career in data science Work with complex data structures in Python Simulate with Monte Carlo and Stochastic algorithms Apply linear algebra using vectors and matrices Utilize complex algorithms such as gradient descent and principal component analysis Wrangle, cleanse, visualize, and problem solve with data Use MongoDB and JSON to work with data Who This Book Is For The novice yearning to break into the data science world, and the enthusiast looking to enrich, deepen, and develop data science skills through mastering the underlying fundamentals that are sometimes skipped over in the rush to be productive. Some knowledge of object-oriented programming will make learning easier.

Create, deploy, and test your Python applications, analyses, and models with ease using Streamlit Key Features Learn how to showcase machine learning models in a Streamlit application effectively and efficiently Become an expert Streamlit creator by getting hands-on with complex application creation Discover how Streamlit enables you to create and deploy apps effortlessly Book Description Streamlit shortens the development time for the creation of data-focused web applications, allowing data scientists to create web app prototypes using Python in hours instead of days. Getting Started with Streamlit for Data Science takes a hands-on approach to helping you learn the tips and tricks that will have you up and running with Streamlit in no time. You'll start with the fundamentals of Streamlit by creating a basic app and gradually build on the foundation by producing high-quality graphics with data visualization and testing machine learning models. As you advance through the chapters, you'll walk through practical examples of both personal data projects and work-related data-focused web applications, and get to grips with more challenging topics such as using Streamlit Components, beautifying your apps, and quick deployment of your new apps. By the end of this book, you'll be able to create dynamic web apps in Streamlit quickly and effortlessly using the power of Python. What you will learn Set up your first development environment and create a basic Streamlit app from scratch Explore methods for uploading, downloading, and manipulating data in Streamlit apps Create dynamic visualizations in Streamlit using built-in and imported Python libraries Discover strategies for creating and deploying machine learning models in Streamlit Use Streamlit sharing for one-click deployment Beautify Streamlit apps using themes, Streamlit Components, and Streamlit sidebar Implement best practices for prototyping your data science work with Streamlit Who this book is for This book is for data scientists and machine learning enthusiasts who want to create web apps using Streamlit. Whether you're a junior data scientist looking to deploy your first machine learning project in Python to improve your resume or a senior data scientist who wants to use Streamlit to make convincing and dynamic data analyses, this book will help you get there! Prior knowledge of Python programming will assist with understanding the concepts covered.

Python Data Science Handbook Essential Tools for Working with Data "O'Reilly Media, Inc."

Explore the latest Python tools and techniques to help you tackle the world of data acquisition and analysis. You'll review scientific computing with NumPy, visualization with matplotlib, and machine learning with scikit-learn. This revision is fully updated with new content on social media data analysis, image analysis with OpenCV, and deep learning libraries. Each chapter includes multiple examples demonstrating how to work with each library. At its heart lies the coverage of pandas, for high-performance, easy-to-use data structures and tools for data manipulation Author Fabio Nelli expertly demonstrates using Python for data processing, management, and information retrieval. Later chapters apply what you've learned to handwriting recognition and extending graphical capabilities with the JavaScript D3 library. Whether you are dealing with sales data, investment data, medical data, web page usage, or other data sets, Python Data Analytics, Second Edition is an invaluable reference with its examples of storing, accessing, and analyzing data. What You'll Learn Understand the core concepts of data analysis and the Python ecosystem Go in depth with pandas for reading, writing, and processing data Use tools and techniques for data visualization and image analysis Examine popular deep learning libraries Keras, Theano, TensorFlow, and PyTorch Who This Book Is For Experienced Python developers who need to learn about Pythonic tools for data analysis

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.

Are you looking for a super-fast computer programming course? Do you want to use the Python Programming Language to implement your own Data Analysis solution and you don't know how to start? Do you want to increase your business and activity? Then keep reading! Python Data Science will introduce you in the language of Python and discover the world of data science, machine learning and artificial intelligence. You will also learn all the best tricks of writing codes. The following list is just a tiny fraction of what you will learn: ? The basics of Python programming ? Differences among programming languages: Vba, SQL, R, Python ? 4 reason why Python is fundamental for Data Science ? A few Python libraries are introduced, including NumPy, Pandas, Matplotlib, ? Python design patterns ? How to use Python Data Analysis in your business ? Data visualization optimal tools and techniques ? Analysis of popular Python projects templates ? Game creation with Python Examples and step-by-step guides will guide you during the code-writing learning process. You can enjoy these info both in academic and industrial levels Even if you have never written a programming code before, you will quickly grasp the basics thanks to visual charts and guidelines for coding. Then, if you really wish to explore the world of python data science, learn and master its language, please click the BUY NOW button.

Learn data science by doing data science! Data Science Using Python and R will get you plugged into the world's two most widespread open-source platforms for data science: Python and R. Data science is hot. Bloomberg called data scientist "the hottest job in America." Python and R are the top two open-source data science tools in the world. In Data Science Using Python and R, you will learn step-by-step how to produce hands-on solutions to real-world business problems, using state-of-the-art techniques. Data Science Using Python and R is written for the general reader with no previous analytics or programming experience. An entire chapter is dedicated to learning the basics of Python and R. Then, each chapter presents step-by-step instructions and walkthroughs for solving data science problems using Python and R. Those with analytics experience will appreciate having a one-stop shop for learning how to do data science using Python and R. Topics covered include data preparation, exploratory data analysis, preparing to model the data, decision trees, model evaluation, misclassification costs, naïve Bayes classification, neural networks, clustering, regression modeling, dimension reduction, and association rules mining. Further, exciting new topics such as random forests and general linear models are also included. The book emphasizes data-driven error costs to enhance profitability, which avoids the common pitfalls that may cost a company millions of dollars. Data Science Using Python and R provides exercises at the end of every chapter, totaling over 500 exercises in the book. Readers will therefore have plenty of opportunity to test their newfound data science skills and expertise. In the Hands-on Analysis exercises, readers are challenged to solve interesting business problems using real-world data sets.

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

datasets Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples Getting started with data science doesn't have to be an uphill battle. This step-by-step guide is ideal for beginners who know a little Python and are looking for a quick, fast-paced introduction. Key Features Get up and running with the Jupyter ecosystem and some example datasets Learn about key machine learning concepts like SVM, KNN classifiers and Random Forests Discover how you can use web scraping to gather and parse your own bespoke datasets Book Description Get to grips with the skills you need for entry-level data science in this hands-on Python and Jupyter course. You'll learn about some of the most commonly used libraries that are part of the Anaconda distribution, and then explore machine learning models with real datasets to give you the skills and exposure you need for the real world. We'll finish up by showing you how easy it can be to scrape and gather your own data from the open web, so that you can apply your new skills in an actionable context. What you will learn Get up and running with the Jupyter ecosystem and some example datasets Learn about key machine learning concepts like SVM, KNN classifiers, and Random Forests Plan a machine learning classification strategy and train classification, models Use validation curves and dimensionality reduction to tune and enhance your models Discover how you can use web scraping to gather and parse your own bespoke datasets Scrape tabular data from web pages and transform them into Pandas DataFrames Create interactive, web-friendly visualizations to clearly communicate your findings Who this book is for This book is ideal for professionals with a variety of job descriptions across large range of industries, given the rising popularity and accessibility of data science. You'll need some prior experience with Python, with any prior work with libraries like Pandas, Matplotlib and Pandas providing you a useful head start.

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

The book provides a one-stop solution for getting into data science with Python and teaches how to extract insights from data.

Get well-versed with FastAPI features and best practices for testing, monitoring, and deployment to run high-quality and robust data science applications Key Features Cover the concepts of the FastAPI framework, including aspects relating to asynchronous programming, type hinting, and dependency injection Develop efficient RESTful APIs for data science with modern Python Build, test, and deploy high performing data science and machine learning systems with FastAPI Book Description FastAPI is a web framework for building APIs with Python 3.6 and its later versions based on standard Python-type hints. With this book, you'll be able to create fast and reliable data science API backends using practical examples. This book starts with the basics of the FastAPI framework and associated modern Python programming language concepts. You'll be taken through all the aspects of the framework, including its powerful dependency injection system and how you can use it to communicate with databases, implement authentication and integrate machine learning models. Later, you'll cover best practices relating to testing and deployment to run a high-quality and robust application. You'll also be introduced to the extensive ecosystem of Python data science packages. As you progress, you'll learn how to build data science applications in Python using FastAPI. The book also demonstrates how to develop fast and efficient machine learning prediction backends and test them to achieve the best performance. Finally, you'll see how to implement a real-time face detection system using WebSockets and a web browser as a client. By the end of this FastAPI book, you'll have not only learned how to implement Python in data science projects but also how to maintain and design them to meet high programming standards with the help of FastAPI. What you will learn Explore the basics of modern Python and async I/O programming Get to grips with basic and advanced concepts of the FastAPI framework Implement a FastAPI dependency to efficiently run a machine learning model Integrate a simple face detection algorithm in a FastAPI backend Integrate common Python data science libraries in a web backend Deploy a performant and reliable web backend for a data science application Who this book is for This Python data science book is for data scientists and software developers interested in gaining knowledge of FastAPI and its ecosystem to build data science applications. Basic knowledge of data science and machine learning concepts and how to apply them in Python is recommended.

Explore the web and make smarter predictions using Python About This Book Targets two big and prominent markets where sophisticated web apps are of need and importance. Practical examples of building machine learning web application, which are easy to follow and replicate. A comprehensive tutorial on Python libraries and frameworks to get you up and started. Who This Book Is For The book is aimed at upcoming and new data scientists who have little experience with machine learning or users who are interested in and are working on developing smart (predictive) web applications. Knowledge of Django would be beneficial. The reader is expected to have a background in Python programming and good knowledge of statistics. What You Will Learn Get familiar with the fundamental concepts and some of the jargons used in the machine learning community Use tools and techniques to mine data from websites Grasp the core concepts of Django framework Get to know the most useful clustering and classification techniques and implement them in Python Acquire all the necessary knowledge to build a web application with Django Successfully build and deploy a movie recommendation system application using the Django framework in Python In Detail Python is a general purpose and also a comparatively easy to learn programming language. Hence it is the language of choice for data scientists to prototype, visualize, and run data analyses on small and medium-sized data sets. This is a unique book that helps bridge the gap between machine learning and web development. It focuses on the difficulties of implementing predictive analytics in web applications. We focus on the Python language, frameworks, tools, and libraries, showing you how to build a machine learning system. You will explore the core machine learning concepts and then develop and deploy the data into a web application using the Django framework. You will also learn to carry out web, document, and server mining tasks, and build recommendation engines. Later, you will explore Python's impressive Django framework and will find out how to build a modern simple web app with machine learning features. Style and approach Instead of being overwhelmed with multiple concepts at once, this book provides a step-by-step approach that will guide you through one topic at a time. An intuitive step-by-step guide that will focus on one key topic at a time. Building upon the acquired knowledge in each chapter, we will connect the fundamental theory and practical tips by illustrative visualizations and hands-on code examples.

Over 140 practical recipes to help you make sense of your data with ease and build production-ready data apps About This Book Analyze Big Data sets, create attractive visualizations, and manipulate and process various data types Packed with rich recipes to help you learn and explore amazing algorithms for statistics and machine learning Authored by Ivan Idris, expert in python programming and proud author of eight highly reviewed books Who This Book Is For This book teaches Python data analysis at an intermediate level with the goal of transforming you from journeyman to master. Basic Python and data analysis skills and affinity are assumed. What You Will Learn Set up reproducible data analysis Clean and transform data Apply advanced statistical analysis Create attractive data visualizations Web scrape and work with databases, Hadoop, and Spark Analyze images and time series data Mine text and analyze social networks Use machine learning and evaluate the results Take advantage of parallelism and concurrency In Detail Data analysis is a rapidly evolving field and Python is a multi-paradigm programming language suitable for object-oriented application development and functional design patterns. As Python offers a range of tools and libraries for all purposes, it has slowly evolved as the primary language for data science, including topics on: data analysis, visualization, and machine learning. Python Data Analysis Cookbook focuses on reproducibility and creating production-ready systems. You will start with recipes that set the foundation for data analysis with libraries such as matplotlib, NumPy, and pandas. You will learn to create visualizations by choosing color maps and palettes then dive into statistical data analysis using distribution algorithms and correlations. You'll then help you find your way around different data and numerical problems, get to grips with Spark and HDFS, and then set up migration scripts for web mining. In this book, you will dive deeper into recipes on spectral analysis, smoothing, and bootstrapping methods. Moving on, you will learn to rank stocks and check market efficiency, then work with metrics and clusters. You will achieve parallelism to improve system performance by using multiple threads and speeding up your code. By the end of the book, you will be capable of handling various data analysis techniques in Python and devising solutions for problem scenarios. Style and Approach The book is written in "cookbook" style striving for high realism in data analysis. Through the recipe-based format, you can read each recipe separately as required and immediately apply the knowledge gained.

Become the master player of data exploration by creating reproducible data processing pipelines, visualizations, and prediction models for your applications. Key Features Get up and running with the Jupyter ecosystem and some example datasets Learn about key machine learning concepts such as SVM, KNN classifiers, and Random Forests Discover how you can use web scraping to gather and parse your own bespoke datasets Book Description Getting started with data science doesn't have to be an uphill battle. Applied Data Science with Python and Jupyter is a step-by-step guide ideal for beginners who know a little Python and are looking for a quick, fast-paced introduction to these concepts. In this book, you'll learn every aspect of the standard data workflow process, including collecting, cleaning, investigating, visualizing, and modeling data. You'll start with the basics of Jupyter, which will be the backbone of the book. After familiarizing ourselves with its standard features, you'll look at an example of it in practice with our first analysis. In the next lesson, you dive right into predictive analytics, where multiple classification algorithms are implemented. Finally, the book ends by looking at data collection techniques. You'll see how web data can be acquired with scraping techniques and via APIs, and then briefly explore interactive visualizations. What you will learn Get up and running with the Jupyter ecosystem Identify potential areas of investigation and perform exploratory data analysis Plan a machine learning classification strategy and train classification models Use validation curves and dimensionality reduction to tune and enhance your models Scrape tabular data from web pages and transform it into Pandas DataFrames Create interactive, web-friendly visualizations to clearly communicate your findings Who this book is for Applied Data Science with Python and Jupyter is ideal for professionals with a variety of job descriptions across a large range of industries, given the rising popularity and accessibility of data science. You'll need some prior experience with Python, with any prior work with libraries such as Pandas, Matplotlib, and Pandas providing you a useful head start.

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