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Website Scraping with Python - Gábor László Hajba 2018
Offering road-tested techniques for website scraping and solutions to common issues developers may face, this concise and focused book provides tips and tweaking guidance for the popular scraping tools BeautifulSoup and Scrapy. --
Learning Scrapy - Dimitrios Kouzis-Loukas 2016-01-30

Learn the art of efficient web scraping and crawling with Python About This Book Extract data from any source to perform real time analytics. Full of techniques and examples to help you crawl websites and extract data within hours. A hands-on guide to web scraping and crawling with real-life problems and solutions Who This Book Is For If you are a software developer, data scientist, NLP or machine-learning enthusiast or just need to migrate your company's wiki from a legacy platform, then this book is for you. It is perfect for someone , who needs instant access to large amounts of semi-structured data effortlessly. What You Will Learn Understand HTML pages and write XPath to extract the data you need Write Scrapy spiders with simple Python and do web crawls Push your data into any database, search engine or analytics system Configure your spider to download files, images and use proxies Create efficient pipelines that shape data in precisely the form you want Use Twisted Asynchronous API to process hundreds of items concurrently Make your crawler super-fast by learning how to tune Scrapy's performance Perform large scale distributed crawls with scrapyd and scrapinghub In Detail This book covers the long awaited Scrapy v 1.0 that empowers you to extract useful data from virtually any source with very little effort. It starts off by explaining the fundamentals of Scrapy framework, followed by a thorough description of how to extract data from any source, clean it up, shape it as per your requirement using Python and 3rd party APIs. Next you will be familiarised with the process of storing the scrapped data in databases as well as search engines and performing real time analytics on them with Spark Streaming. By the end of this book, you will perfect the art of scarping data for your applications with ease Style and approach It is a hands on guide, with first few chapters written as a tutorial, aiming to motivate you and get you started quickly. As the book progresses, more advanced features are

explained with real world examples that can be reffered while developing your own web applications.

Learn Python by Building Data Science Applications - Philipp Kats 2019-08-30 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.

Python - Andy Vickler 2021-08
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 ClassesDon't waste any more time. Scroll up, click on Buy Now, and get started on your Python programming journey!

Learn Python 3 the Hard Way - Zed A. Shaw 2017-06-26

You Will Learn Python 3! Zed Shaw has perfected the world's best system for learning Python 3. Follow it and you will succeed—just like the millions of beginners Zed has taught to date! You bring the discipline, commitment, and persistence; the author supplies everything else. In Learn Python 3 the Hard Way, you'll learn Python by working through 52 brilliantly crafted exercises. Read them. Type their code precisely. (No copying and pasting!) Fix your mistakes. Watch the programs run. As you do, you'll learn how a computer works; what good programs look like; and how to read, write, and think about code. Zed then teaches you even more in 5+ hours of video where he shows you how to break, fix, and debug your code—live, as he's doing the exercises. Install a complete Python environment Organize and write code Fix and break code Basic mathematics Variables Strings and text Interact with users Work with files Looping and logic Data structures using lists and dictionaries Program design Object-oriented programming Inheritance and composition Modules, classes, and objects Python packaging Automated testing Basic game development Basic web development It'll be hard at first. But soon, you'll just get it—and that will feel great! This course will reward you for every minute you put into it. Soon, you'll know one of the world's most powerful, popular programming languages. You'll be a Python programmer. This Book Is Perfect For Total beginners with zero programming experience Junior developers who know one or two languages Returning professionals who haven't written code in years Seasoned professionals looking for a fast, simple, crash course in Python 3

Web Scraping with Python - Ryan Mitchell 2015-06-15
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

Django for Professionals - William S. Vincent 2022-05-19

Completely updated for Django 4.0! Django for Professionals takes your web development skills to the next level, teaching you how to build production-ready websites with Python and Django. Once you have learned the basics of Django there is a massive gap between building simple "toy apps" and what it takes to build a "production-ready" web application suitable for deployment to thousands or even millions of users. In the book you'll learn how to: * Build a Bookstore website from scratch * Use Docker and PostgreSQL locally to mimic production settings * Implement advanced user registration with email * Customize permissions to control user access * Write comprehensive tests * Adopt advanced security and performance improvements * Add search and file/image uploads * Deploy with confidence If you want to take advantage of all that Django has to offer, Django for Professionals is a comprehensive best practices guide to building and deploying modern websites.

R Web Scraping Quick Start Guide - Olgun Aydin 2018-10-31

Web Scraping techniques are getting more popular, since data is as valuable as oil in 21st century. Through this book get some key knowledge about using XPath, regEX; web scraping libraries for R like rvest and RSelenium technologies. Key FeaturesTechniques, tools and frameworks for web scraping with RScrape data effortlessly from a variety of websites Learn how to selectively choose the data to scrape, and build your datasetBook Description Web scraping is a technique to extract data from websites. It simulates the behavior of a website user to turn the website itself into a web service to retrieve or introduce new data. This book gives you all you need to get started with scraping web pages using R programming. You will learn about the rules of RegEx and Xpath, key components for scraping website data. We will show you web scraping techniques, methodologies, and frameworks. With this book's guidance, you will become comfortable with the tools to write and test RegEx and XPath rules. We will focus on examples of dynamic websites for scraping data and how to implement the techniques learned. You will learn how to collect URLs and then create XPath rules for your first web scraping script using rvest library. From the data you collect, you will be able to calculate the statistics and create R plots to visualize them. Finally, you will discover how to use Selenium drivers with R for more sophisticated scraping. You will create AWS instances and use R to connect a PostgreSQL database hosted on AWS. By the end of the book, you will be sufficiently confident to create end-to-end web scraping systems using R. What you will learnWrite and create regEX rulesWrite XPath rules to query your dataLearn how web scraping methods workUse rvest to crawl web pagesStore data retrieved from the webLearn the key uses of Rselenium to scrape dataWho this book is for This book is for R programmers who want to get started quickly with web scraping, as well as data analysts who want to

learn scraping using R. Basic knowledge of R is all you need to get started with this book.

Python for Excel - Felix Zumstein 2021-03-04 While Excel remains ubiquitous in the business world, recent Microsoft feedback forums are full of requests to include Python as an Excel scripting language. In fact, it's the top feature requested. What makes this combination so compelling? In this hands-on guide, Felix Zumstein--creator of xlwings, a popular open source package for automating Excel with Python--shows experienced Excel users how to integrate these two worlds efficiently. Excel has added quite a few new capabilities over the past couple of years, but its automation language, VBA, stopped evolving a long time ago. Many Excel power users have already adopted Python for daily automation tasks. This guide gets you started. Use Python without extensive programming knowledge Get started with modern tools, including Jupyter notebooks and Visual Studio code Use pandas to acquire, clean, and analyze data and replace typical Excel calculations Automate tedious tasks like consolidation of Excel workbooks and production of Excel reports Use xlwings to build interactive Excel tools that use Python as a calculation engine Connect Excel to databases and CSV files and fetch data from the internet using Python code Use Python as a single tool to replace VBA, Power Query, and Power Pivot

Getting Started with Beautiful Soup - Vineeth G. Nair 2014-01-24 This book is a practical, hands-on guide that takes you through the techniques of web scraping using Beautiful Soup. Getting Started with Beautiful Soup is great for anybody who is interested in website scraping and extracting information. However, a basic knowledge of Python, HTML tags, and CSS is required for better understanding.

Python Natural Language Processing - Jalaj Thanaki 2017-07-31 Leverage the power of machine learning and

deep learning to extract information from text data About This Book Implement Machine Learning and Deep Learning techniques for efficient natural language processing Get started with NLTK and implement NLP in your applications with ease Understand and interpret human languages with the power of text analysis via Python Who This Book Is For This book is intended for Python developers who wish to start with natural language processing and want to make their applications smarter by implementing NLP in them. What You Will Learn Focus on Python programming paradigms, which are used to develop NLP applications Understand corpus analysis and different types of data attribute. Learn NLP using Python libraries such as NLTK, Polyglot, SpaCy, Standford CoreNLP and so on Learn about Features Extraction and Feature selection as part of Features Engineering. Explore the advantages of vectorization in Deep Learning. Get a better understanding of the architecture of a rule-based system. Optimize and fine-tune Supervised and Unsupervised Machine Learning algorithms for NLP problems. Identify Deep Learning techniques for Natural Language Processing and Natural Language Generation problems. In Detail This book starts off by laying the foundation for Natural Language Processing and why Python is one of the best options to build an NLP-based expert system with advantages such as Community support, availability of frameworks and so on. Later it gives you a better understanding of available free forms of corpus and different types of dataset. After this, you will know how to choose a dataset for natural language processing applications and find the right NLP techniques to process sentences in datasets and understand their structure. You will also learn how to tokenize different parts of sentences and ways to analyze them. During the course of the book, you will explore the semantic as well as syntactic analysis of text. You will understand how to

solve various ambiguities in processing human language and will come across various scenarios while performing text analysis. You will learn the very basics of getting the environment ready for natural language processing, move on to the initial setup, and then quickly understand sentences and language parts. You will learn the power of Machine Learning and Deep Learning to extract information from text data. By the end of the book, you will have a clear understanding of natural language processing and will have worked on multiple examples that implement NLP in the real world. Style and approach This book teaches the readers various aspects of natural language Processing using NLTK. It takes the reader from the basic to advance level in a smooth way.

Python Web Scraping, Second Edition - Katharine Jarmul 2017-05-30
Successfully scrape data from any website with the power of Python 3.xAbout This Book* A hands-on guide to web scraping using Python with solutions to real-world problems* Create a number of different web scrapers in Python to extract information* This book includes practical examples on using the popular and well-maintained libraries in Python for your web scraping needsWho This Book Is ForThis book is aimed at developers who want to use web scraping for legitimate purposes. Prior programming experience with Python would be useful but not essential. Anyone with general knowledge of programming languages should be able to pick up the book and understand the principals involved.What You Will Learn* Extract data from web pages with simple Python programming* Build a concurrent crawler to process web pages in parallel* Follow links to crawl a website* Extract features from the HTML* Cache downloaded HTML for reuse* Compare concurrent models to determine the fastest crawler* Find out how to parse JavaScript-dependent websites* Interact with forms and sessionsIn DetailThe Internet contains

the most useful set of data ever assembled, most of which is publicly accessible for free. However, this data is not easily usable. It is embedded within the structure and style of websites and needs to be carefully extracted. Web scraping is becoming increasingly useful as a means to gather and make sense of the wealth of information available online.This book is the ultimate guide to using the latest features of Python 3.x to scrape data from websites. In the early chapters, you'll see how to extract data from static web pages. You'll learn to use caching with databases and files to save time and manage the load on servers. After covering the basics, you'll get hands-on practice building a more sophisticated crawler using browsers, crawlers, and concurrent scrapers.You'll determine when and how to scrape data from a JavaScript-dependent website using PyQt and Selenium. You'll get a better understanding of how to submit forms on complex websites protected by CAPTCHA. You'll find out how to automate these actions with Python packages such as mechanize. You'll also learn how to create class-based scrapers with Scrapy libraries and implement your learning on real websites.By the end of the book, you will have explored testing websites with scrapers, remote scraping, best practices, working with images, and many other relevant topics.Style and approachThis hands-on guide is full of real-life examples and solutions starting simple and then progressively becoming more complex. Each chapter in this book introduces a problem and then provides one or more possible solutions.

Mining Social Media - Lam Thuy Vo 2019-11-25 BuzzFeed News Senior Reporter Lam Thuy Vo explains how to mine, process, and analyze data from the social web in meaningful ways with the Python programming language. Did fake Twitter accounts help sway a presidential election? What can Facebook and Reddit archives tell us about human behavior? In Mining Social Media, senior BuzzFeed reporter Lam Thuy Vo shows you how

to use Python and key data analysis tools to find the stories buried in social media. Whether you're a professional journalist, an academic researcher, or a citizen investigator, you'll learn how to use technical tools to collect and analyze data from social media sources to build compelling, data-driven stories. Learn how to: Write Python scripts and use APIs to gather data from the social web Download data archives and dig through them for insights Inspect HTML downloaded from websites for useful content Format, aggregate, sort, and filter your collected data using Google Sheets Create data visualizations to illustrate your discoveries Perform advanced data analysis using Python, Jupyter Notebooks, and the pandas library Apply what you've learned to research topics on your own Social media is filled with thousands of hidden stories just waiting to be told. Learn to use the data-sleuthing tools that professionals use to write your own data-driven stories.

Python Basics - Dan Bader 2021-03-16

Make the Leap From Beginner to Intermediate in Python... Python Basics: A Practical Introduction to Python 3 Your Complete Python Curriculum-With Exercises, Interactive Quizzes, and Sample Projects What should you learn about Python in the beginning to get a strong foundation? With Python Basics, you'll not only cover the core concepts you really need to know, but you'll also learn them in the most efficient order with the help of practical exercises and interactive quizzes. You'll know enough to be dangerous with Python, fast! Who Should Read This Book If you're new to Python, you'll get a practical, step-by-step roadmap on developing your foundational skills. You'll be introduced to each concept and language feature in a logical order. Every step in this curriculum is explained and illustrated with short, clear code samples. Our goal with this book is to educate, not to impress or intimidate. If you're familiar with some basic programming concepts, you'll get a clear and well-tested introduction to Python.

This is a practical introduction to Python that jumps right into the meat and potatoes without sacrificing substance. If you have prior experience with languages like VBA, PowerShell, R, Perl, C, C++, C#, Java, or Swift the numerous exercises within each chapter will fast-track your progress. If you're a seasoned developer, you'll get a Python 3 crash course that brings you up to speed with modern Python programming. Mix and match the chapters that interest you the most and use the interactive quizzes and review exercises to check your learning progress as you go along. If you're a self-starter completely new to coding, you'll get practical and motivating examples. You'll begin by installing Python and setting up a coding environment on your computer from scratch, and then continue from there. We'll get you coding right away so that you become competent and knowledgeable enough to solve real-world problems, fast. Develop a passion for programming by solving interesting problems with Python every day! If you're looking to break into a coding or data-science career, you'll pick up the practical foundations with this book. We won't just dump a boat load of theoretical information on you so you can "sink or swim"- instead you'll learn from hands-on, practical examples one step at a time. Each concept is broken down for you so you'll always know what you can do with it in practical terms. If you're interested in teaching others "how to Python," this will be your guidebook. If you're looking to stoke the coding flame in your coworkers, kids, or relatives-use our material to teach them. All the sequencing has been done for you so you'll always know what to cover next and how to explain it. What Python Developers Say About The Book: "Go forth and learn this amazing language using this great book." - Michael Kennedy, Talk Python "The wording is casual, easy to understand, and makes the information flow well." - Thomas Wong, Pythonista "I floundered for a long time trying to teach myself.

I slogged through dozens of incomplete online tutorials. I snoozed through hours of boring screencasts. I gave up on countless crufty books from big-time publishers. And then I found Real Python. The easy-to-follow, step-by-step instructions break the big concepts down into bite-sized chunks written in plain English. The authors never forget their audience and are consistently thorough and detailed in their explanations. I'm up and running now, but I constantly refer to the material for guidance." - Jared Nielsen, Pythonista

Web Scraping With Python - Chris Sheridan 2017-03-13
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.

Python Tricks - Dan Bader 2017
"I don't even feel like I've scratched the surface of what I can do with Python" With Python Tricks: The Book you'll discover Python's best practices and the power of beautiful & Pythonic code with simple examples and a step-by-step narrative. You'll get one step closer to mastering Python, so you can write beautiful and idiomatic code that comes to you naturally. Learning the ins and outs of Python is difficult-and with this book you'll be able to focus on the practical skills that really matter. Discover the "hidden gold" in Python's standard library and start writing clean and Pythonic code today. Who Should Read This Book: If you're wondering which lesser known parts in Python you should know about, you'll get a roadmap with this book. Discover cool (yet practical!) Python tricks and blow your coworkers' minds in your next code review. If you've got experience with legacy versions of Python, the book will get you up to speed with modern patterns and features introduced in Python 3 and backported to Python 2. If you've worked with other programming languages and

you want to get up to speed with Python, you'll pick up the idioms and practical tips you need to become a confident and effective Pythonista. If you want to make Python your own and learn how to write clean and Pythonic code, you'll discover best practices and little-known tricks to round out your knowledge. What Python Developers Say About The Book: "I kept thinking that I wished I had access to a book like this when I started learning Python many years ago." - Mariatta Wijaya, Python Core Developer "This book makes you write better Python code!" - Bob Belderbos, Software Developer at Oracle "Far from being just a shallow collection of snippets, this book will leave the attentive reader with a deeper understanding of the inner workings of Python as well as an appreciation for its beauty." - Ben Felder, Pythonista "It's like having a seasoned tutor explaining, well, tricks!" - Daniel Meyer, Sr. Desktop Administrator at Tesla Inc. **Getting Structured Data from the Internet** - Jay M. Patel 2020-12-13

Utilize web scraping at scale to quickly get unlimited amounts of free data available on the web into a structured format. This book teaches you to use Python scripts to crawl through websites at scale and scrape data from HTML and JavaScript-enabled pages and convert it into structured data formats such as CSV, Excel, JSON, or load it into a SQL database of your choice. This book goes beyond the basics of web scraping and covers advanced topics such as natural language processing (NLP) and text analytics to extract names of people, places, email addresses, contact details, etc., from a page at production scale using distributed big data techniques on an Amazon Web Services (AWS)-based cloud infrastructure. It book covers developing a robust data processing and ingestion pipeline on the Common Crawl corpus, containing petabytes of data publicly available and a web crawl data set available on AWS's registry of open data. Getting Structured Data from the Internet also includes a step-by-step

tutorial on deploying your own crawlers using a production web scraping framework (such as Scrapy) and dealing with real-world issues (such as breaking Captcha, proxy IP rotation, and more). Code used in the book is provided to help you understand the concepts in practice and write your own web crawler to power your business ideas. What You Will Learn Understand web scraping, its applications/uses, and how to avoid web scraping by hitting publicly available rest API endpoints to directly get data Develop a web scraper and crawler from scratch using lxml and BeautifulSoup library, and learn about scraping from JavaScript-enabled pages using Selenium Use AWS-based cloud computing with EC2, S3, Athena, SQS, and SNS to analyze, extract, and store useful insights from crawled pages Use SQL language on PostgreSQL running on Amazon Relational Database Service (RDS) and SQLite using SQLalchemy Review sci-kit learn, Gensim, and spaCy to perform NLP tasks on scraped web pages such as name entity recognition, topic clustering (Kmeans, Agglomerative Clustering), topic modeling (LDA, NMF, LSI), topic classification (naive Bayes, Gradient Boosting Classifier) and text similarity (cosine distance-based nearest neighbors) Handle web archival file formats and explore Common Crawl open data on AWS Illustrate practical applications for web crawl data by building a similar website tool and a technology profiler similar to builtwith.com Write scripts to create a backlinks database on a web scale similar to Ahrefs.com, Moz.com, Majestic.com, etc., for search engine optimization (SEO), competitor research, and determining website domain authority and ranking Use web crawl data to build a news sentiment analysis system or alternative financial analysis covering stock market trading signals Write a production-ready crawler in Python using Scrapy framework and deal with practical workarounds for Captchas, IP rotation, and more Who This Book Is For Primary audience: data analysts and scientists

with little to no exposure to real-world data processing challenges, secondary: experienced software developers doing web-heavy data processing who need a primer, tertiary: business owners and startup founders who need to know more about implementation to better direct their technical team

A Python Guide for Web Scraping - Pradumna Milind Panditrao 2021-05-18
Get hands-on training on any web crawling/scraping tool and uses of web scraping in the real-time industry KEY FEATURES ● Includes numerous use-cases on the use of web scraping for industrial applications. ● Learn how to automate web scraping tasks. ● Explore ready-made syntaxes of Python scripts to run web scraping. DESCRIPTION A Python Guide for Web Scraping is a book that will give information about the importance of web scraping using Python. It includes real-time examples of web scraping. It implies the automation use cases of web scraping as well. It gives information about the different tools and libraries of web scraping so that readers get a wide idea about the features and existence of web scraping. In this book, we started with the basics of Python and its syntactical information. We briefed about the use cases and features of Python. We have explained the importance of Python in automation systems. Furthermore, we have added information about real-time industrial examples. We have concentrated and deep-dived into Python's importance in web scraping, explained the different tools and their usages. We have explained the real-time industrial domain-wise use cases for web scraping. WHAT YOU WILL LEARN ● Explore the Python syntax and key features of using Python for web scraping. ● Usage of Python in the web scraping tasks and how to automate scraping. ● How to use different libraries and modules of Python. WHO THIS BOOK IS FOR This book is basically for data engineers and data programmers who have a basic knowledge

of Python and for the readers who want to learn about web scraping projects for industries.

TABLE OF CONTENTS 1. Python Basics 2. Use Cases of Python 3. Automation Using Python 4. Industrial Automation-Python 5. Web Scraping 6. Web Scraping and Necessity 7. Python - Web Scraping and Different Tools 8. Automation in Web Scraping 9. Use Cases-Web Scraping 10. Industrial Benefits of Web Scraping

Data Wrangling with Python - Jacqueline Kazil 2016-02-04
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

Hands-On Web Scraping with Python - Anish Chapagain 2019-07-15
Collect and scrape different complexities of data from the modern Web using the latest tools, best practices, and techniques Key Features Learn various scraping techniques using a range of Python libraries such as Scrapy and Beautiful Soup Build scrapers and crawlers to extract relevant information from the web Automate

web scraping operations to bridge the accuracy gap and ease complex business needs Book Description Web scraping is an essential technique used in many organizations to scrape valuable data from web pages. This book will enable you to delve deeply into web scraping techniques and methodologies. This book will introduce you to the fundamental concepts of web scraping techniques and how they can be applied to multiple sets of web pages. We'll use powerful libraries from the Python ecosystem—such as Scrapy, lxml, pyquery, bs4, and others—to carry out web scraping operations. We will take an in-depth look at essential tasks to carry out simple to intermediate scraping operations such as identifying information from web pages, using patterns or attributes to retrieve information, and others. This book adopts a practical approach to web scraping concepts and tools, guiding you through a series of use cases and showing you how to use the best tools and techniques to efficiently scrape web pages. This book also covers the use of other popular web scraping tools, such as Selenium, Regex, and web-based APIs. By the end of this book, you will have learned how to efficiently scrape the web using different techniques with Python and other popular tools. What you will learn Analyze data and Information from web pages Learn how to use browser-based developer tools from the scraping perspective Use XPath and CSS selectors to identify and explore markup elements Learn to handle and manage cookies Explore advanced concepts in handling HTML forms and processing logins Optimize web securities, data storage, and API use to scrape data Use Regex with Python to extract data Deal with complex web entities by using Selenium to find and extract data Who this book is for This book is for Python programmers, data analysts, web scraping newbies, and anyone who wants to learn how to perform web scraping from scratch. If you want to begin your journey in applying

web scraping techniques to a range of web pages, then this book is what you need! A working knowledge of the Python programming language is expected.

Python for Everybody - Charles R. Severance 2016-04-09
Python for Everybody is designed to introduce students to programming and software development through the lens of exploring data. You can think of the Python programming language as your tool to solve data problems that are beyond the capability of a spreadsheet.Python is an easy to use and easy to learn programming language that is freely available on Macintosh, Windows, or Linux computers. So once you learn Python you can use it for the rest of your career without needing to purchase any software.This book uses the Python 3 language. The earlier Python 2 version of this book is titled "Python for Informatics: Exploring Information".There are free downloadable electronic copies of this book in various formats and supporting materials for the book at www.pythonlearn.com. The course materials are available to you under a Creative Commons License so you can adapt them to teach your own Python course.

Web Scraping for Data Science with Python - Seppe vanden Broucke 2017-11-30
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 Beautiful Soup 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. *Automate the Boring Stuff with Python, 2nd Edition* - Al Sweigart 2019-11-12 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.

Go Web Scraping Quick Start Guide - Vincent Smith 2019-01-30
Web scraping is the process of extracting information from the web using various tools that perform scraping and crawling. Go is emerging as the language of choice for scraping using a variety of libraries. This book will quickly explain to you, how to scrape data data from various websites using Go libraries such as Colly and Goquery.
Python Web Scraping - Katharine Jarmul 2017-05-30
Successfully scrape data from any website with the power of Python 3.x About This Book A hands-on guide to web scraping using Python with solutions to real-world problems Create a number of different web scrapers in Python to extract information This book includes practical examples on using the popular and well-maintained libraries in Python for your web scraping needs Who This Book Is For This book is aimed at developers who want to use web scraping for legitimate purposes. Prior programming experience with Python would be useful but not essential. Anyone with general knowledge of programming languages should be able to pick up the book and understand the principals involved. What You Will Learn Extract data from web pages with simple Python programming Build a concurrent crawler to process web pages in parallel Follow links to crawl a website Extract features from the HTML Cache downloaded HTML for reuse Compare concurrent models to determine the fastest crawler Find out how to parse JavaScript-dependent websites Interact with forms and sessions In Detail The Internet contains the most useful set of data ever assembled, most of which is publicly accessible for free. However, this data is not easily usable. It is embedded within the structure and style of websites and needs to be carefully extracted. Web scraping is becoming increasingly useful as a means to gather and make sense of the wealth of information

available online. This book is the ultimate guide to using the latest features of Python 3.x to scrape data from websites. In the early chapters, you'll see how to extract data from static web pages. You'll learn to use caching with databases and files to save time and manage the load on servers. After covering the basics, you'll get hands-on practice building a more sophisticated crawler using browsers, crawlers, and concurrent scrapers. You'll determine when and how to scrape data from a JavaScript-dependent website using PyQt and Selenium. You'll get a better understanding of how to submit forms on complex websites protected by CAPTCHA. You'll find out how to automate these actions with Python packages such as mechanize. You'll also learn how to create class-based scrapers with Scrapy libraries and implement your learning on real websites. By the end of the book, you will have explored testing websites with scrapers, remote scraping, best practices, working with images, and many other relevant topics. Style

and approach This hands-on guide is full of real-life examples and solutions starting simple and then progressively becoming more complex. Each chapter in this book introduces a problem and then provides one or more possible solutions.

Python Web Scraping Cookbook - Michael Heydt 2018-02-09
Untangle your web scraping complexities and access web data with ease using Python scripts Key Features Hands-on recipes for advancing your web scraping skills to expert level One-stop solution guide to address complex and challenging web scraping tasks using Python Understand web page structures and collect data from a website with ease Book Description Python Web Scraping Cookbook is a solution-focused book that will teach you techniques to develop high-performance Scrapers, and deal with cookies, hidden form fields, Ajax-based sites and proxies. You'll explore a number of real-world scenarios where every part of the

development or product life cycle will be fully covered. You will not only develop the skills to design reliable, high-performing data flows, but also deploy your codebase to Amazon Web Services (AWS). If you are involved in software engineering, product development, or data mining or in building data-driven products, you will find this book useful as each recipe has a clear purpose and objective. Right from extracting data from websites to writing a sophisticated web crawler, the book's independent recipes will be extremely helpful while on the job. This book covers Python libraries, requests, and BeautifulSoup. You will learn about crawling, web spidering, working with AJAX websites, and paginated items. You will also understand to tackle problems such as 403 errors, working with proxy, scraping images, and LXML. By the end of this book, you will be able to scrape websites more efficiently and deploy and operate your scraper in the cloud. What you will learn Use a variety of tools to scrape any website and data, including Scrapy and Selenium Master expression languages, such as XPath and CSS, and regular expressions to extract web data Deal with scraping traps such as hidden form fields, throttling, pagination, and different status codes Build robust scraping pipelines with SQS and RabbitMQ Scrape assets like image media and learn what to do when Scraper fails to run Explore ETL techniques of building a customized crawler, parser, and convert structured and unstructured data from websites Deploy and run your scraper as a service in AWS Elastic Container Service Who this book is for This book is ideal for Python programmers, web administrators, security professionals, and anyone who wants to perform web analytics. Familiarity with Python and basic understanding of web scraping will be useful to make the best of this book.

Web Scraping with Python - Richard Lawson 2015-10-28

Successfully scrape data from any website with the power of Python About This Book A hands-on guide to web scraping with real-life problems and solutions Techniques to download and extract data from complex websites Create a number of different web scrapers to extract information Who This Book Is For This book is aimed at developers who want to use web scraping for legitimate purposes. Prior programming experience with Python would be useful but not essential. Anyone with general knowledge of programming languages should be able to pick up the book and understand the principals involved. What You Will Learn Extract data from web pages with simple Python programming Build a threaded crawler to process web pages in parallel Follow links to crawl a website Download cache to reduce bandwidth Use multiple threads and processes to scrape faster Learn how to parse JavaScript-dependent websites Interact with forms and sessions Solve CAPTCHAs on protected web pages Discover how to track the state of a crawl In Detail The Internet contains the most useful set of data ever assembled, largely publicly accessible for free. However, this data is not easily reusable. It is embedded within the structure and style of websites and needs to be carefully extracted to be useful. Web scraping is becoming increasingly useful as a means to easily gather and make sense of the plethora of information available online. Using a simple language like Python, you can crawl the information out of complex websites using simple programming. This book is the ultimate guide to using Python to scrape data from websites. In the early chapters it covers how to extract data from static web pages and how to use caching to manage the load on servers. After the basics we'll get our hands dirty with building a more sophisticated crawler with threads and more advanced topics. Learn step-by-step how to use Ajax URLs, employ the Firebug extension for monitoring, and indirectly scrape data. Discover

more scraping nitty-gritties such as using the browser renderer, managing cookies, how to submit forms to extract data from complex websites protected by CAPTCHA, and so on. The book wraps up with how to create high-level scrapers with Scrapy libraries and implement what has been learned to real websites. Style and approach This book is a hands-on guide with real-life examples and solutions starting simple and then progressively becoming more complex. Each chapter in this book introduces a problem and then provides one or more possible solutions.
Hands-On Web Scraping with Python - Anish Chapagain 2019-06-14

Learning Scrapy - Dimitris Kouzis - Loukas 2016-01-29
Learn the art of efficient web scraping and crawling with PythonAbout This Book• Extract data from any source to perform real time analytics.• Full of techniques and examples to help you crawl websites and extract data within hours.• A hands-on guide to web scraping and crawling with real-life problems and solutionsWho This Book Is ForIf you are a software developer, data scientist, NLP or machine-learning enthusiast or just need to migrate your company's wiki from a legacy platform, then this book is for you. It is perfect for someone , who needs instant access to large amounts of semi-structured data effortlessly.What You Will Learn• Understand HTML pages and write XPath to extract the data you need• Write Scrapy spiders with simple Python and do web crawls• Push your data into any database, search engine or analytics system• Configure your spider to download files, images and use proxies• Create efficient pipelines that shape data in precisely the form you want• Use Twisted Asynchronous API to process hundreds of items concurrently• Make your crawler super-fast by learning how to tune Scrapy's performance• Perform large scale

distributed crawls with scrapyd and scrapinghubIn DetailThis book covers the long awaited Scrapy v 1.0 that empowers you to extract useful data from virtually any source with very little effort. It starts off by explaining the fundamentals of Scrapy framework, followed by a thorough description of how to extract data from any source, clean it up, shape it as per your requirement using Python and 3rd party APIs. Next you will be familiarised with the process of storing the scrapped data in databases as well as search engines and performing real time analytics on them with Spark Streaming. By the end of this book, you will perfect the art of scarping data for your applications with easeStyle and approachIt is a hands on guide, with first few chapters written as a tutorial, aiming to motivate you and get you started quickly. As the book progresses, more advanced features are explained with real world examples that can be reffered while developing your own web applications.

Learn Web Development with Python - Fabrizio Romano 2018-12-21
A comprehensive guide to Python programming for web development using the most popular Python web framework - Django Key FeaturesLearn the fundamentals of programming with Python and building web appsBuild web applications from scratch with DjangoCreate real-world RESTful web services with the latest Django frameworkBook Description If you want to develop complete Python web apps with Django, this Learning Path is for you. It will walk you through Python programming techniques and guide you in implementing them when creating 4 professional Django projects, teaching you how to solve common problems and develop RESTful web services with Django and Python. You will learn how to build a blog application, a social image bookmarking website, an online shop, and an e-learning platform. Learn Web Development with Python will get you started with Python

programming techniques, show you how to enhance your applications with AJAX, create RESTful APIs, and set up a production environment for your Django projects. Last but not least, you'll learn the best practices for creating real-world applications. By the end of this Learning Path, you will have a full understanding of how Django works and how to use it to build web applications from scratch. This Learning Path includes content from the following Packt products: Learn Python Programming by Fabrizio RomanoDjango RESTful Web Services by Gastón C. HillarDjango Design Patterns and Best Practices by Arun RavindranWhat you will learnExplore the fundamentals of Python programming with interactive projectsGrasp essential coding concepts along with the basics of data structures and control flowDevelop RESTful APIs from scratch with Django and the Django REST FrameworkCreate automated tests for RESTful web servicesDebug, test, and profile RESTful web services with Django and the Django REST FrameworkUse Django with other technologies such as Redis and CeleryWho this book is for If you have little experience in coding or Python and want to learn how to build full-fledged web apps, this Learning Path is for you. No prior experience with RESTful web services, Python, or Django is required, but basic Python programming experience is needed to understand the concepts covered.

Python Automation Cookbook - Jaime Buelta 2020-05-29
Get a firm grip on the core processes including browser automation, web scraping, Word, Excel, and GUI automation with Python 3.8 and higher Key FeaturesAutomate integral business processes such as report generation, email marketing, and lead generationExplore automated code testing and Python's growth in data science and AI automation in three new chaptersUnderstand techniques to extract information and generate appealing graphs, and

reports with MatplotlibBook Description In this updated and extended version of Python Automation Cookbook, each chapter now comprises the newest recipes and is revised to align with Python 3.8 and higher. The book includes three new chapters that focus on using Python for test automation, machine learning projects, and for working with messy data. This edition will enable you to develop a sharp understanding of the fundamentals required to automate business processes through real-world tasks, such as developing your first web scraping application, analyzing information to generate spreadsheet reports with graphs, and communicating with automatically generated emails. Once you grasp the basics, you will acquire the practical knowledge to create stunning graphs and charts using Matplotlib, generate rich graphics with relevant information, automate marketing campaigns, build machine learning projects, and execute debugging techniques. By the end of this book, you will be proficient in identifying monotonous tasks and resolving process inefficiencies to produce superior and reliable systems. What you will learnLearn data wrangling with Python and Pandas for your data science and AI projectsAutomate tasks such as text classification, email filtering, and web scraping with PythonUse Matplotlib to generate a variety of stunning graphs, charts, and mapsAutomate a range of report generation tasks, from sending SMS and email campaigns to creating templates, adding images in Word, and even encrypting PDFsMaster web scraping and web crawling of popular file formats and directories with tools like Beautiful SoupBuild cool projects such as a Telegram bot for your marketing campaign, a reader from a news RSS feed, and a machine learning model to classify emails to the correct department based on their contentCreate fire-and-forget automation tasks by writing cron jobs, log files, and regexes with Python scriptingWho this book is for Python Automation

Cookbook - Second Edition is for developers, data enthusiasts or anyone who wants to automate monotonous manual tasks related to business processes such as finance, sales, and HR, among others. Working knowledge of Python is all you need to get started with this book.

Python - Andy Vickler 2021-07-30
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!

The Hitchhiker's Guide to Python - Kenneth Reitz 2016-08-30
The Hitchhiker's Guide to Python takes the journeyman Pythonista to true expertise. More than any other language, Python was created with the philosophy of simplicity and parsimony. Now 25 years old, Python has become the primary or secondary language (after SQL) for many business users. With popularity comes

diversity—and possibly dilution. This guide, collaboratively written by over a hundred members of the Python community, describes best practices currently used by package and application developers. Unlike other books for this audience, The Hitchhiker's Guide is light on reusable code and heavier on design philosophy, directing the reader to excellent sources that already exist.

Web Scraping with Python - Ryan Mitchell 2018-03-21
If programming is magic then web scraping is surely a form of wizardry. By writing a simple automated program, you can query web servers, request data, and parse it to extract the information you need. The expanded edition of this practical book not only introduces you web scraping, but also serves as a comprehensive guide to scraping almost every type of data from the modern web. Part I focuses on web scraping mechanics: using Python to request information from a web server, performing basic handling of

the server's response, and interacting with sites in an automated fashion. Part II explores a variety of more specific tools and applications to fit any web scraping scenario you're likely to encounter. Parse complicated HTML pages Develop crawlers with the Scrapy framework Learn methods to store data you scrape Read and extract data from documents Clean and normalize badly formatted data Read and write natural languages Crawl through forms and logins Scrape JavaScript and crawl through APIs Use and write image-to-text software Avoid scraping traps and bot blockers Use scrapers to test your website

Practical Web Scraping for Data Science - Seppe vanden Broucke 2018-04-18
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.

Mining the Social Web - Matthew Russell 2011-01-21
Provides information on data analysis from a vareity of social networking sites, including Facebook, Twitter, and LinkedIn.

Data Visualization with Python and JavaScript - Kyran Dale 2016-06-30
Learn how to turn raw data into rich, interactive web visualizations with the powerful combination of Python and JavaScript. With this hands-on guide, author Kyran Dale teaches you how build a basic dataviz toolchain with best-of-breed Python and JavaScript libraries—including Scrapy, Matplotlib, Pandas, Flask, and D3—for crafting engaging, browser-based visualizations. As a working example, throughout the book Dale walks you through transforming Wikipedia's table-based list of Nobel Prize winners into an interactive visualization. You'll examine steps along the entire toolchain, from scraping, cleaning, exploring, and delivering data to building the visualization with JavaScript's D3 library. If you're ready to create your own web-based data visualizations—and know either Python or JavaScript— this is the book for you. Learn how to manipulate data with Python Understand the commonalities between Python and JavaScript Extract information from websites by using Python's web-scraping tools, BeautifulSoup and Scrapy Clean and explore data with Python's Pandas, Matplotlib, and Numpy libraries Serve data and create RESTful web APIs with Python's Flask framework Create engaging, interactive web visualizations with JavaScript's D3 library

Python for Data Science - Ethan Williams

2019-08-18
This book is a comprehensive guide for beginners to learn Python Programming, especially its application for Data Science. While the lessons in this book are targeted at the absolute beginner to programming, people at various levels of proficiency in Python, or any other programming languages can also learn some basics and concepts of data science. A few Python libraries are introduced, including NumPy, Pandas, Matplotlib, and Seaborn for data analysis and visualisation. To make the lessons more intuitive and relatable, practical examples and applications of each lesson are given. The reader is equally encouraged to practise the techniques via exercises, within and at the end of the relevant chapters. To help the reader get a full learning experience, there are references to relevant reading and practice materials, and the reader is encouraged to click these links and explore the possibilities they offer. It is expected that with consistency in learning and practicing the reader can master Python and the basics of its application in data science. The only limitation to the reader's progress, however, is themselves!

Data Science from Scratch - Joel Grus
2015-04-14
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

Python for Data Analysis - Wes McKinney 2017-09-25
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