

Gnuplot In Action

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Gnuplot in Action - Philipp K. Janert 2016

[Arduino in Action](#) - Jordan Hochenbaum

2013-05-29

Summary Arduino in Action is a hands-on guide to prototyping and building electronics using the Arduino platform. Suitable for both beginners and advanced users, this easy-to-follow book

begins with the basics and then systematically guides you through projects ranging from your first blinking LED through connecting Arduino to devices like game controllers or your iPhone.

About the Technology Arduino is an open source do-it-yourself electronics platform that supports a mind-boggling collection of sensors and actuators you can use to build anything you can

imagine. Even if you've never attempted a hardware project, this easy-to-follow book will guide you from your first blinking LED through connecting Arduino to your iPhone. About this Book Arduino in Action is a hands-on guide to prototyping and building DIY electronics. You'll start with the basics—unpacking your board and using a simple program to make something happen. Then, you'll attempt progressively more complex projects as you connect Arduino to motors, LCD displays, Wi-Fi, GPS, and Bluetooth. You'll explore input/output sensors, including ultrasound, infrared, and light, and then use them for tasks like robotic obstacle avoidance. Arduino programs look a lot like C or C++, so some programming skill is helpful. What's Inside Getting started with Arduino—no experience required! Writing programs for Arduino Sensing and responding to events Robots, flying vehicles, Twitter machines, LCD displays, and more! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning

Publications. About the Authors Martin Evans is a professional developer, a lifelong electronics enthusiast, and the creator of an Arduino-based underwater ROV. Joshua Noble is an author and creative technologist who works with smart spaces. Jordan Hochenbaum uses Arduino to explore musical expression and creative interaction. Table of Contents Part 1 Getting started Chapter 1 Hello Arduino Chapter 2 Digital input and output Chapter 3 Simple projects: input and output Part 2 Putting Arduino to work Chapter 4 Extending Arduino Chapter 5 Arduino in motion Chapter 6 Object detection Chapter 7 LCD displays Chapter 8 Communications Chapter 9 Game on Chapter 10 Integrating the Arduino with iOS Chapter 11 Making wearables Chapter 12 Adding shields Chapter 13 Software integration

Gnuplot 5.0 Reference Manual - Thomas Williams 2015-08-19

gnuplot is a command-line program that can generate two- and three-dimensional plots of

functions, data, and data fits. It is frequently used for publication-quality graphics as well as education. gnuplot can produce output directly on screen, or in many formats of graphics files, including Portable Network Graphics (PNG), Encapsulated PostScript (EPS), Scalable Vector Graphics (SVG), JPEG and many others. It is also capable of producing LaTeX code that can be included directly in LaTeX documents, making use of LaTeX's fonts and powerful formula notation abilities. The program can be used both interactively and in batch mode using scripts.

Linux Pocket Guide - Daniel J. Barrett

2004-02-18

O'Reilly's Pocket Guides have earned a reputation as inexpensive, comprehensive, and compact guides that have the stuff but not the fluff. Every page of Linux Pocket Guide lives up to this billing. It clearly explains how to get up to speed quickly on day-to-day Linux use. Once you're up and running, Linux Pocket Guide provides an easy-to-use reference that you can

keep by your keyboard for those times when you want a fast, useful answer, not hours in the man pages. Linux Pocket Guide is organized the way you use Linux: by function, not just alphabetically. It's not the 'bible of Linux; it's a practical and concise guide to the options and commands you need most. It starts with general concepts like files and directories, the shell, and X windows, and then presents detailed overviews of the most essential commands, with clear examples. You'll learn each command's purpose, usage, options, location on disk, and even the RPM package that installed it. The Linux Pocket Guide is tailored to Fedora Linux--the latest spin-off of Red Hat Linux--but most of the information applies to any Linux system. Throw in a host of valuable power user tips and a friendly and accessible style, and you'll quickly find this practical, to-the-point book a small but mighty resource for Linux users.

Building Web Apps with WordPress - Brian

Downloaded from clcnetwork.org on by
guest

Messenlehner 2014-04-08

WordPress is much more than a blogging platform. As this practical guide clearly demonstrates, you can use WordPress to build web apps of any type—not mere content sites, but full-blown apps for specific tasks. If you have PHP experience with a smattering of HTML, CSS, and JavaScript, you'll learn how to use WordPress plugins and themes to develop fast, scalable, and secure web apps, native mobile apps, web services, and even a network of multiple WordPress sites. The authors use examples from their recently released SchoolPress app to explain concepts and techniques throughout the book. All code examples are available on GitHub. Compare WordPress with traditional app development frameworks Use themes for views, and plugins for backend functionality Get suggestions for choosing WordPress plugins—or build your own Manage user accounts and roles, and access user data Build asynchronous behaviors in your

app with jQuery Develop native apps for iOS and Android, using wrappers Incorporate PHP libraries, external APIs, and web service plugins Collect payments through ecommerce and membership plugins Use techniques to speed up and scale your WordPress app

Feedback Control for Computer Systems - Philipp K. Janert 2013-09-19

How can you take advantage of feedback control for enterprise programming? With this book, author Philipp K. Janert demonstrates how the same principles that govern cruise control in your car also apply to data center management and other enterprise systems. Through case studies and hands-on simulations, you'll learn methods to solve several control issues, including mechanisms to spin up more servers automatically when web traffic spikes. Feedback is ideal for controlling large, complex systems, but its use in software engineering raises unique issues. This book provides basic theory and lots of practical advice for programmers with no

previous background in feedback control. Learn feedback concepts and controller design Get practical techniques for implementing and tuning controllers Use feedback “design patterns” for common control scenarios Maintain a cache’s “hit rate” by automatically adjusting its size Respond to web traffic by scaling server instances automatically Explore ways to use feedback principles with queueing systems Learn how to control memory consumption in a game engine Take a deep dive into feedback control theory

Gnuplot Cookbook - Lee Phillips 2012-02-24
Written in Cookbook style, the reader will be taught the features of gnuplot through practical examples accompanied by rich illustrations and code. Every aspect has been considered to ensure ease of understanding of even complex features. Whether you are an old hand at gnuplot or new to it, this book is a convenient visual reference that covers the full range of gnuplot's capabilities, including its latest

features. Some basic knowledge of plotting graphs is necessary.

Hadoop in Practice - Alex Holmes 2014-09-29
Summary Hadoop in Practice, Second Edition provides over 100 tested, instantly useful techniques that will help you conquer big data, using Hadoop. This revised new edition covers changes and new features in the Hadoop core architecture, including MapReduce 2. Brand new chapters cover YARN and integrating Kafka, Impala, and Spark SQL with Hadoop. You'll also get new and updated techniques for Flume, Sqoop, and Mahout, all of which have seen major new versions recently. In short, this is the most practical, up-to-date coverage of Hadoop available anywhere. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book It's always a good time to upgrade your Hadoop skills! Hadoop in Practice, Second Edition provides a collection of 104 tested, instantly useful techniques for analyzing real-

time streams, moving data securely, machine learning, managing large-scale clusters, and taming big data using Hadoop. This completely revised edition covers changes and new features in Hadoop core, including MapReduce 2 and YARN. You'll pick up hands-on best practices for integrating Spark, Kafka, and Impala with Hadoop, and get new and updated techniques for the latest versions of Flume, Sqoop, and Mahout. In short, this is the most practical, up-to-date coverage of Hadoop available. Readers need to know a programming language like Java and have basic familiarity with Hadoop. What's Inside Thoroughly updated for Hadoop 2 How to write YARN applications Integrate real-time technologies like Storm, Impala, and Spark Predictive analytics using Mahout and RR Readers need to know a programming language like Java and have basic familiarity with Hadoop. About the Author Alex Holmes works on tough big-data problems. He is a software engineer, author, speaker, and blogger specializing in

large-scale Hadoop projects. Table of Contents
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Ham Radio For Dummies - H. Ward Silver
2018-03-02

Your how-to guide to become a ham Ham radio, or amateur radio, is a way to talk with people around the world in real-time, or to send email without any sort of internet connection. It provides a way to keep in touch with friends and family, whether they are across town or across the country. It is also a very important emergency communication system. When cell

phones, landlines, the internet, and other systems are down or overloaded, Amateur Radio still gets the message through. Radio amateurs, often called "hams," enjoy radio technology as a hobby, but are often called upon to provide vital service when regular communications systems fail. Ham Radio For Dummies is your guide to everything there is to know about ham radio. Plus, this updated edition provides new and additional information on digital mode operating, as well as use of amateur radio in student science and new operating events.

- Set up your radio station
- Design your ham shack
- Provide support in emergencies and communicate with other hams
- Study for the licensing exam and choose your call sign

If you're looking to join a college radio club or just want to learn the latest tips and tricks, this book is a helpful reference guide to beginners, or those who have been "hams" for years.

Python Data Science Handbook - Jake VanderPlas 2016-11-21

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

Rust in Action - Tim McNamara 2021-09-07
"This well-written book will help you make the most of what Rust has to offer." - Ramnivas Laddad, author of AspectJ in Action
Rust in Action is a hands-on guide to systems programming with Rust. Written for inquisitive programmers, it presents real-world use cases that go far beyond syntax and structure. Summary Rust in Action introduces the Rust programming language by exploring numerous systems programming concepts and techniques. You'll be learning Rust by delving into how computers work under the hood. You'll find yourself playing with persistent storage, memory, networking and even tinkering with

CPU instructions. The book takes you through using Rust to extend other applications and teaches you tricks to write blindingly fast code. You'll also discover parallel and concurrent programming. Filled to the brim with real-life use cases and scenarios, you'll go beyond the Rust syntax and see what Rust has to offer in real-world use cases. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Rust is the perfect language for systems programming. It delivers the low-level power of C along with rock-solid safety features that let you code fearlessly. Ideal for applications requiring concurrency, Rust programs are compact, readable, and blazingly fast. Best of all, Rust's famously smart compiler helps you avoid even subtle coding errors. About the book Rust in Action is a hands-on guide to systems programming with Rust. Written for inquisitive programmers, it presents real-world use cases that go far beyond syntax and

structure. You'll explore Rust implementations for file manipulation, networking, and kernel-level programming and discover awesome techniques for parallelism and concurrency. Along the way, you'll master Rust's unique borrow checker model for memory management without a garbage collector. What's inside Elementary to advanced Rust programming Practical examples from systems programming Command-line, graphical and networked applications About the reader For intermediate programmers. No previous experience with Rust required. About the author Tim McNamara uses Rust to build data processing pipelines and generative art. He is an expert in natural language processing and data engineering. Table of Contents 1 Introducing Rust PART 1 RUST LANGUAGE DISTINCTIVES 2 Language foundations 3 Compound data types 4 Lifetimes, ownership, and borrowing PART 2 DEMYSTIFYING SYSTEMS PROGRAMMING 5 Data in depth 6 Memory 7 Files and storage 8

Networking 9 Time and timekeeping 10 Processes, threads, and containers 11 Kernel 12 Signals, interrupts, and exceptions

Open Data Structures - Pat Morin 2013

Introduction -- Array-based lists -- Linked lists -- Skiplists -- Hash tables -- Binary trees -- Random binary search trees -- Scapegoat trees -- Red-black trees -- Heaps -- Sorting algorithms -- Graphs -- Data structures for integers -- External memory searching.

Building Distributed Applications in Gin -

Mohamed Labouardy 2021-07-23

An effective guide to learning how to build a large-scale distributed application using the wide range of functionalities in Gin Key Features Explore the commonly used functionalities of Gin to build web applications Become well-versed with rendering HTML templates with the Gin engine Solve commonly occurring challenges such as scaling, caching, and deployment Book Description Gin is a high-performance HTTP web framework used

to build web applications and microservices in Go. This book is designed to teach you the ins and outs of the Gin framework with the help of practical examples. You'll start by exploring the basics of the Gin framework, before progressing to build a real-world RESTful API. Along the way, you'll learn how to write custom middleware and understand the routing mechanism, as well as how to bind user data and validate incoming HTTP requests. The book also demonstrates how to store and retrieve data at scale with a NoSQL database such as MongoDB, and how to implement a caching layer with Redis. Next, you'll understand how to secure and test your API endpoints with authentication protocols such as OAuth 2 and JWT. Later chapters will guide you through rendering HTML templates on the server-side and building a frontend application with the React web framework to consume API responses. Finally, you'll deploy your application on Amazon Web Services (AWS) and learn how to automate the

deployment process with a continuous integration/continuous delivery (CI/CD) pipeline. By the end of this Gin book, you will be able to design, build, and deploy a production-ready distributed application from scratch using the Gin framework. What you will learn

- Build a production-ready REST API with the Gin framework
- Scale web applications with event-driven architecture
- Use NoSQL databases for data persistence
- Set up authentication middleware with JWT and Auth0
- Deploy a Gin-based RESTful API on AWS with Docker and Kubernetes
- Implement a CI/CD workflow for Gin web apps

Who this book is for This book is for Go developers who are comfortable with the Go language and seeking to learn REST API design and development with the Gin framework. Beginner-level knowledge of the Go programming language is required to make the most of this book.

Gnuplot in Action - Philipp K. Janert
2016-03-08

Summary Gnuplot in Action, Second Edition is a major revision of this popular and authoritative guide for developers, engineers, and scientists who want to learn and use gnuplot effectively. Fully updated for gnuplot version 5, the book includes four pages of color illustrations and four bonus appendixes available in the eBook. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Gnuplot is an open-source graphics program that helps you analyze, interpret, and present numerical data. Available for Unix, Mac, and Windows, it is well-maintained, mature, and totally free. About the Book Gnuplot in Action, Second Edition is a major revision of this authoritative guide for developers, engineers, and scientists. The book starts with a tutorial introduction, followed by a systematic overview of gnuplot's core features and full coverage of gnuplot's advanced capabilities. Experienced readers will appreciate the discussion of gnuplot 5's features, including

new plot types, improved text and color handling, and support for interactive, web-based display formats. The book concludes with chapters on graphical effects and general techniques for understanding data with graphs. It includes four pages of color illustrations. 3D graphics, false-color plots, heatmaps, and multivariate visualizations are covered in chapter-length appendixes available in the eBook. What's Inside Creating different types of graphs in detail Animations, scripting, batch operations Extensive discussion of terminals Updated to cover gnuplot version 5 About the Reader No prior experience with gnuplot is required. This book concentrates on practical applications of gnuplot relevant to users of all levels. About the Author Philipp K. Janert, PhD, is a programmer and scientist. He is the author of several books on data analysis and applied math and has been a gnuplot power user and developer for over 20 years. Table of Contents PART 1 GETTING STARTED Prelude:

understanding data with gnuplot Tutorial:
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Data Analysis with Open Source Tools -

Philipp K. Janert 2010-11-11

Collecting data is relatively easy, but turning
raw information into something useful requires
that you know how to extract precisely what you
need. With this insightful book, intermediate to
experienced programmers interested in data
analysis will learn techniques for working with

data in a business environment. You'll learn how
to look at data to discover what it contains, how
to capture those ideas in conceptual models, and
then feed your understanding back into the
organization through business plans, metrics
dashboards, and other applications. Along the
way, you'll experiment with concepts through
hands-on workshops at the end of each chapter.
Above all, you'll learn how to think about the
results you want to achieve -- rather than rely on
tools to think for you. Use graphics to describe
data with one, two, or dozens of variables
Develop conceptual models using back-of-the-
envelope calculations, as well as scaling and
probability arguments Mine data with
computationally intensive methods such as
simulation and clustering Make your conclusions
understandable through reports, dashboards,
and other metrics programs Understand
financial calculations, including the time-value of
money Use dimensionality reduction techniques
or predictive analytics to conquer challenging

data analysis situations Become familiar with different open source programming environments for data analysis "Finally, a concise reference for understanding how to conquer piles of data."--Austin King, Senior Web Developer, Mozilla "An indispensable text for aspiring data scientists."--Michael E. Driscoll, CEO/Founder, Dataspora

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

GNU Octave - Jesper Schmidt Hansen
2011-06-21

Today, scientific computing and data analysis play an integral part in most scientific disciplines ranging from mathematics and biology to imaging processing and finance. With GNU Octave you have a highly flexible tool that

can solve a vast number of such different problems as complex statistical analysis and dynamical system studies. The GNU Octave Beginner's Guide gives you an introduction that enables you to solve and analyze complicated numerical problems. The book is based on numerous concrete examples and at the end of each chapter you will find exercises to test your knowledge. It's easy to learn GNU Octave, with the GNU Octave Beginner's Guide to hand. Using real-world examples the GNU Octave Beginner's Guide will take you through the most important aspects of GNU Octave. This practical guide takes you from the basics where you are introduced to the interpreter to a more advanced level where you will learn how to build your own specialized and highly optimized GNU Octave toolbox package. The book starts by introducing you to work variables like vectors and matrices, demonstrating how to perform simple arithmetic operations on these objects before explaining how to use some of the simple functionality that

comes with GNU Octave, including plotting. It then goes on to show you how to write new functionality into GNU Octave and how to make a toolbox package to solve your specific problem. Finally, it demonstrates how to optimize your code and link GNU Octave with C and C++ code enabling you to solve even the most computationally demanding tasks. After reading GNU Octave Beginner's Guide you will be able to use and tailor GNU Octave to solve most numerical problems and perform complicated data analysis with ease.

[The Data Science Design Manual](#) - Steven S. Skiena 2017-07-01

This engaging and clearly written textbook/reference provides a must-have introduction to the rapidly emerging interdisciplinary field of data science. It focuses on the principles fundamental to becoming a good data scientist and the key skills needed to build systems for collecting, analyzing, and interpreting data. The Data Science Design

Manual is a source of practical insights that highlights what really matters in analyzing data, and provides an intuitive understanding of how these core concepts can be used. The book does not emphasize any particular programming language or suite of data-analysis tools, focusing instead on high-level discussion of important design principles. This easy-to-read text ideally serves the needs of undergraduate and early graduate students embarking on an "Introduction to Data Science" course. It reveals how this discipline sits at the intersection of statistics, computer science, and machine learning, with a distinct heft and character of its own. Practitioners in these and related fields will find this book perfect for self-study as well. Additional learning tools: Contains "War Stories," offering perspectives on how data science applies in the real world Includes "Homework Problems," providing a wide range of exercises and projects for self-study Provides a complete set of lecture slides and online video

lectures at www.data-manual.com Provides "Take-Home Lessons," emphasizing the big-picture concepts to learn from each chapter Recommends exciting "Kaggle Challenges" from the online platform Kaggle Highlights "False Starts," revealing the subtle reasons why certain approaches fail Offers examples taken from the data science television show "The Quant Shop" (www.quant-shop.com)

Data Science at the Command Line - Jeroen Janssens 2021-08-17

This thoroughly revised guide demonstrates how the flexibility of the command line can help you become a more efficient and productive data scientist. You'll learn how to combine small yet powerful command-line tools to quickly obtain, scrub, explore, and model your data. To get you started, author Jeroen Janssens provides a Docker image packed with over 80 tools--useful whether you work with Windows, macOS, or Linux. You'll quickly discover why the command line is an agile, scalable, and extensible

technology. Even if you're comfortable processing data with Python or R, you'll learn how to greatly improve your data science workflow by leveraging the command line's power. This book is ideal for data scientists, analysts, and engineers; software and machine learning engineers; and system administrators. Obtain data from websites, APIs, databases, and spreadsheets Perform scrub operations on text, CSV, HTML, XML, and JSON files Explore data, compute descriptive statistics, and create visualizations Manage your data science workflow Create reusable command-line tools from one-liners and existing Python or R code Parallelize and distribute data-intensive pipelines Model data with dimensionality reduction, clustering, regression, and classification algorithms

Streaming Systems - Tyler Akidau 2018-07-16
Streaming data is a big deal in big data these days. As more and more businesses seek to tame the massive unbounded data sets that pervade

our world, streaming systems have finally reached a level of maturity sufficient for mainstream adoption. With this practical guide, data engineers, data scientists, and developers will learn how to work with streaming data in a conceptual and platform-agnostic way. Expanded from Tyler Akidau's popular blog posts "Streaming 101" and "Streaming 102", this book takes you from an introductory level to a nuanced understanding of the what, where, when, and how of processing real-time data streams. You'll also dive deep into watermarks and exactly-once processing with co-authors Slava Chernyak and Reuven Lax. You'll explore: How streaming and batch data processing patterns compare The core principles and concepts behind robust out-of-order data processing How watermarks track progress and completeness in infinite datasets How exactly-once data processing techniques ensure correctness How the concepts of streams and tables form the foundations of both batch and

streaming data processing The practical motivations behind a powerful persistent state mechanism, driven by a real-world example How time-varying relations provide a link between stream processing and the world of SQL and relational algebra

Java Cookbook - Ian F. Darwin 2014-06-25
From lambda expressions and JavaFX 8 to new support for network programming and mobile development, Java 8 brings a wealth of changes. This cookbook helps you get up to speed right away with hundreds of hands-on recipes across a broad range of Java topics. You'll learn useful techniques for everything from debugging and data structures to GUI development and functional programming. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they work. If you are familiar with Java basics, this cookbook will bolster your knowledge of the language in general and Java 8's main APIs in particular. Recipes include: Methods for

compiling, running, and debugging
Manipulating, comparing, and rearranging text
Regular expressions for string- and pattern-matching
Handling numbers, dates, and times
Structuring data with collections, arrays, and other types
Object-oriented and functional programming techniques
Directory and filesystem operations
Working with graphics, audio, and video
GUI development, including JavaFX and handlers
Network programming on both client and server
Database access, using JPA, Hibernate, and JDBC
Processing JSON and XML for data storage
Multithreading and concurrency

D3 for the Impatient - Philipp K. Janert
2019-05-02

If you're in a hurry to learn D3.js, the leading JavaScript library for web-based graphics and visualization, this book is for you. Written for technically savvy readers with a background in programming or data science, the book moves quickly, emphasizing unifying concepts and

patterns. Anticipating common difficulties, author Philipp K. Janert teaches you how to apply D3 to your own problems. Assuming only a general programming background, but no previous experience with contemporary web development, this book explains supporting technologies such as SVG, HTML5, CSS, and the DOM as needed, making it a convenient one-stop resource for a technical audience. Understand D3 selections, the library's fundamental organizing principle Learn how to create data-driven documents with data binding Create animated graphs and interactive user interfaces Draw figures with curves, shapes, and colors Use the built-in facilities for heatmaps, tree graphs, and networks Simplify your work by writing your own reusable components

[Learning Highcharts 4](#) - Joe Kuan 2015-01-23
The book is aimed at all levels of readers. Beginners can learn the basic configurations and step-by-step approaches in creating charts or Highcharts cloud. For intermediate and

advanced readers, the book explores the APIs, events, server-side operations and plugins.

Mahout in Action - Sean Owen 2011-10-04
Summary Mahout in Action is a hands-on introduction to machine learning with Apache Mahout. Following real-world examples, the book presents practical use cases and then illustrates how Mahout can be applied to solve them. Includes a free audio- and video-enhanced ebook. About the Technology A computer system that learns and adapts as it collects data can be really powerful. Mahout, Apache's open source machine learning project, captures the core algorithms of recommendation systems, classification, and clustering in ready-to-use, scalable libraries. With Mahout, you can immediately apply to your own projects the machine learning techniques that drive Amazon, Netflix, and others. About this Book This book covers machine learning using Apache Mahout. Based on experience with real-world applications, it introduces practical use cases

and illustrates how Mahout can be applied to solve them. It places particular focus on issues of scalability and how to apply these techniques against large data sets using the Apache Hadoop framework. This book is written for developers familiar with Java -- no prior experience with Mahout is assumed. Owners of a Manning pBook purchased anywhere in the world can download a free eBook from manning.com at any time. They can do so multiple times and in any or all formats available (PDF, ePub or Kindle). To do so, customers must register their printed copy on Manning's site by creating a user account and then following instructions printed on the pBook registration insert at the front of the book.

What's Inside

- Use group data to make individual recommendations
- Find logical clusters within your data
- Filter and refine with on-the-fly classification
- Free audio and video extras

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Meet Apache Mahout

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Case study: Shop It To Me

R in Action - Robert I. Kabacoff 2015-05-20

Summary

R in Action, Second Edition presents both the R language and the examples that make it so useful for business developers. Focusing on practical solutions, the book offers a crash course in statistics and covers elegant methods for dealing with messy and incomplete data that are difficult to analyze using traditional methods. You'll also master R's extensive graphical capabilities for exploring and presenting data visually. And this expanded

second edition includes new chapters on time series analysis, cluster analysis, and classification methodologies, including decision trees, random forests, and support vector machines. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Business pros and researchers thrive on data, and R speaks the language of data analysis. R is a powerful programming language for statistical computing. Unlike general-purpose tools, R provides thousands of modules for solving just about any data-crunching or presentation challenge you're likely to face. R runs on all important platforms and is used by thousands of major corporations and institutions worldwide. About the Book R in Action, Second Edition teaches you how to use the R language by presenting examples relevant to scientific, technical, and business developers. Focusing on practical solutions, the book offers a crash course in statistics, including elegant methods

for dealing with messy and incomplete data. You'll also master R's extensive graphical capabilities for exploring and presenting data visually. And this expanded second edition includes new chapters on forecasting, data mining, and dynamic report writing. What's Inside Complete R language tutorial Using R to manage, analyze, and visualize data Techniques for debugging programs and creating packages OOP in R Over 160 graphs About the Author Dr. Rob Kabacoff is a seasoned researcher and teacher who specializes in data analysis. He also maintains the popular Quick-R website at statmethods.net. Table of Contents PART 1 GETTING STARTED Introduction to R Creating a dataset Getting started with graphs Basic data management Advanced data management PART 2 BASIC METHODS Basic graphs Basic statistics PART 3 INTERMEDIATE METHODS Regression Analysis of variance Power analysis Intermediate graphs Resampling statistics and bootstrapping PART 4 ADVANCED METHODS Generalized

linear models Principal components and factor analysis Time series Cluster analysis Classification Advanced methods for missing data PART 5 EXPANDING YOUR SKILLS Advanced graphics with ggplot2 Advanced programming Creating a package Creating dynamic reports Advanced graphics with the lattice package available online only from manning.com/kabacoff2

Automated Solution of Differential Equations by the Finite Element Method - Anders Logg
2012-02-24

This book is a tutorial written by researchers and developers behind the FEniCS Project and explores an advanced, expressive approach to the development of mathematical software. The presentation spans mathematical background, software design and the use of FEniCS in applications. Theoretical aspects are complemented with computer code which is available as free/open source software. The book begins with a special introductory tutorial for

beginners. Following are chapters in Part I addressing fundamental aspects of the approach to automating the creation of finite element solvers. Chapters in Part II address the design and implementation of the FEniCS software. Chapters in Part III present the application of FEniCS to a wide range of applications, including fluid flow, solid mechanics, electromagnetics and geophysics.

GraphQL in Action - Samer Buna 2021-03-09
GraphQL in Action gives you the tools to get comfortable with the GraphQL language, build and optimize a data API service, and use it in a front-end client application. Summary Reduce bandwidth demands on your APIs by getting only the results you need—all in a single request! The GraphQL query language simplifies interactions with web servers, enabling smarter API queries that can hugely improve the efficiency of data requests. In GraphQL in Action, you'll learn how to bring those benefits to your own APIs, giving your clients the power to ask for exactly what

they need from your server, no more, no less. Practical and example-driven, this book teaches everything you need to get started with GraphQL—from design principles and syntax right through to performance optimization. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology GraphQL APIs are fast, efficient, and easy to maintain. They reduce app latency and server cost while boosting developer productivity. This powerful query layer offers precise control over API requests and returns, making apps faster and less prone to error. About the book GraphQL in Action gives you the tools to get comfortable with the GraphQL language, build and optimize a data API service, and use it in a front-end client application. By working through set up, security, and error handling you'll learn to create a complete GraphQL server. You'll also unlock easy ways to incorporate GraphQL into your existing codebase so you can build simple,

scalable data APIs. What's inside Define a GraphQL schema for relational and document databases Implement GraphQL types using both the schema language and object constructor methods Optimize GraphQL resolvers with data caching and batching Design GraphQL fragments that match UI components' data requirements Consume GraphQL API queries, mutations, and subscriptions with and without a GraphQL client library About the reader For web developers familiar with client-server applications. About the author Samer Buna has over 20 years of experience in software development including front-ends, back-ends, API design, and scalability. Table of Contents PART 1 - EXPLORING GRAPHQL 1 Introduction to GraphQL 2 Exploring GraphQL APIs 3 Customizing and organizing GraphQL operations PART 2 - BUILDING GRAPHQL APIs 4 Designing a GraphQL schema 5 Implementing schema resolvers 6 Working with database models and relations 7 Optimizing data fetching 8

Implementing mutations PART 3 - USING GRAPHQL APIs 9 Using GraphQL APIs without a client library 10 Using GraphQL APIs with Apollo client

Sage for Undergraduates - Gregory V. Bard
2015-02-16

As the open-source and free competitor to expensive software like MapleTM, Mathematica®, Magma, and MATLAB®, Sage offers anyone with access to a web browser the ability to use cutting-edge mathematical software and display his or her results for others, often with stunning graphics. This book is a gentle introduction to Sage for undergraduate students toward the end of Calculus II (single-variable integral calculus) or higher-level course work such as Multivariate Calculus, Differential Equations, Linear Algebra, or Math Modeling. The book assumes no background in computer science, but the reader who finishes the book will have learned about half of a first semester Computer Science I

course, including large parts of the Python programming language. The audience of the book is not only math majors, but also physics, engineering, finance, statistics, chemistry, and computer science majors.

Gnuplot 5.2 Manual - Thomas Williams
2017-09-04

Gnuplot is a portable command-line driven graphing utility for Linux, OS/2, MS Windows, OSX, VMS, and many other platforms. The source code is copyrighted but freely distributed (i.e., you don't have to pay for it). It was originally created to allow scientists and students to visualize mathematical functions and data interactively, but has grown to support many non-interactive uses such as web scripting. It is also used as a plotting engine by third-party applications like Octave. Gnuplot has been supported and under active development since 1986. Gnuplot supports many types of plots in either 2D and 3D. It can draw using lines, points, boxes, contours, vector fields, surfaces, and

various associated text. It also supports various specialized plot types. This manual is available online for free at gnuplot.info. This manual is printed in grayscale.

Urban Analytics - Alex D. Singleton 2017-11-27

The economic and political situation of cities has shifted in recent years in light of rapid growth amidst infrastructure decline, the suburbanization of poverty and inner city revitalization. At the same time, the way that data are used to understand urban systems has changed dramatically. Urban Analytics offers a field-defining look at the challenges and opportunities of using new and emerging data to study contemporary and future cities through methods including GIS, Remote Sensing, Big Data and Geodemographics. Written in an accessible style and packed with illustrations and interviews from key urban analysts, this is a groundbreaking new textbook for students of urban planning, urban design, geography, and the information sciences.

Python for Scientists - John M. Stewart

2017-07-20

Scientific Python is taught from scratch in this book via copious, downloadable, useful and adaptable code snippets. Everything the working scientist needs to know is covered, quickly providing researchers and research students with the skills to start using Python effectively.

MasteringConcurrencyinGo - Nathan Kozyra

2014-07-19

Pandas in Action - Boris Paskhaver 2021-10-05

Pandas has rapidly become one of Python's most popular data analysis libraries. With pandas you can efficiently sort, analyze, filter and munge almost any type of data. In Pandas in Action, a friendly and example-rich introduction, author Boris Paskhaver shows you how to master this versatile tool and take the next steps in your data science career. about the technology Anyone who's used spreadsheet software will find pandas familiar. While its column-based

grids might remind you of Excel or Google Sheets, pandas is more flexible and far more powerful. It can efficiently perform operations on millions of rows and be used in tandem with other Python libraries for statistics, machine learning, and more. And best of all, using pandas doesn't mean sacrificing user productivity or needing to write tons of complex code. It's clean, intuitive, and fast. about the book Pandas in Action makes it easy to dive into Python-based data analysis. You'll learn to use pandas to automate repetitive spreadsheet functionality and derive insight from data by sorting columns, filtering data subsets, and creating multi-leveled indices. Each chapter is a self-contained tutorial, letting you dip in when you need to troubleshoot tricky problems. Best of all, you won't be learning from sterile or randomly created data. You'll start with a variety of datasets that are big, small, incomplete, broken, and messy and learn how to clean and format them for proper analysis. what's inside Import a CSV, identify

issues with its data structures, and convert it to the proper format Sort, filter, pivot, and draw conclusions from a dataset and its subsets Identify trends from text-based and time-based data Organize, group, merge, and join separate datasets Real-world datasets that are easy to download and explore about the reader For readers experienced with spreadsheet software who know the basics of Python. about the author Boris Paskhaver is a software engineer, Agile consultant, and educator. His six programming courses on Udemy have amassed 236,000 students, with an average course rating of 4.59 out of 5. He first used Python and the pandas library to derive a variety of business insights at the world's #1 jobs site, Indeed.com.

Information Theory, Inference and Learning Algorithms - David J. C. MacKay 2003-09-25

Table of contents

matplotlib Plotting Cookbook - Alexandre Devert 2014-03-26

This book follows a cookbook style approach that

puts orthogonal and non-redundant recipes in your hands. Rather than rehashing the user manual, the explanations expose the underlying logic behind Matplotlib. If you are an engineer or scientist who wants to create great visualizations with Python, rather than yet another specialized language, this is the book for you. While there are several very competent plotting packages, Matplotlib is just a Python module. Thus, if you know some Python already, you will feel at home from the first steps on. In case you are an application writer, you won't be left out since the integration of Matplotlib is covered.

Canonical Perturbation Theories - Sylvio Ferraz-Mello 2007-05-30

The book is written mainly to advanced graduate and post-graduate students following courses in Perturbation Theory and Celestial Mechanics. It is also intended to serve as a guide in research work and is written in a very explicit way: all perturbation theories are given with details

allowing its immediate application to real problems. In addition, they are followed by examples showing all steps of their application. *Gnuplot in Action* - Philipp K. Janert 2016-03-30 Summary Gnuplot in Action, Second Edition is a major revision of this popular and authoritative guide for developers, engineers, and scientists who want to learn and use gnuplot effectively. Fully updated for gnuplot version 5, the book includes four pages of color illustrations and four bonus appendixes available in the eBook. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Gnuplot is an open-source graphics program that helps you analyze, interpret, and present numerical data. Available for Unix, Mac, and Windows, it is well-maintained, mature, and totally free. About the Book Gnuplot in Action, Second Edition is a major revision of this authoritative guide for developers, engineers, and scientists. The book starts with a tutorial introduction, followed by a

systematic overview of gnuplot's core features and full coverage of gnuplot's advanced capabilities. Experienced readers will appreciate the discussion of gnuplot 5's features, including new plot types, improved text and color handling, and support for interactive, web-based display formats. The book concludes with chapters on graphical effects and general techniques for understanding data with graphs. It includes four pages of color illustrations. 3D graphics, false-color plots, heatmaps, and multivariate visualizations are covered in chapter-length appendixes available in the eBook. What's Inside Creating different types of graphs in detail Animations, scripting, batch operations Extensive discussion of terminals Updated to cover gnuplot version 5 About the Reader No prior experience with gnuplot is required. This book concentrates on practical applications of gnuplot relevant to users of all levels. About the Author Philipp K. Janert, PhD, is a programmer and scientist. He is the author

of several books on data analysis and applied math and has been a gnuplot power user and developer for over 20 years. Table of Contents PART 1 GETTING STARTED Prelude: understanding data with gnuplot Tutorial: essential gnuplot The heart of the matter: the plot command PART 2 CREATING GRAPHS Managing data sets and files Practical matters: strings, loops, and history A catalog of styles Decorations: labels, arrows, and explanations All about axes PART 3 MASTERING TECHNICALITIES Color, style, and appearance Terminals and output formats Automation, scripting, and animation Beyond the defaults: workflow and styles PART 4 UNDERSTANDING DATA Basic techniques of graphical analysis Topics in graphical analysis Coda: understanding data with graphs **21st Century C** - Ben Klemens 2012-10-15 Throw out your old ideas about C and get to know a programming language that's substantially outgrown its origins. With this

revised edition of 21st Century C, you'll discover up-to-date techniques missing from other C tutorials, whether you're new to the language or just getting reacquainted. C isn't just the foundation of modern programming languages; it is a modern language, ideal for writing efficient, state-of-the-art applications. Get past idioms that made sense on mainframes and learn the tools you need to work with this evolved and aggressively simple language. No matter what programming language you currently favor, you'll quickly see that 21st century C rocks. Set up a C programming environment with shell facilities, makefiles, text editors, debuggers, and memory checkers Use Autotools, C's de facto cross-platform package manager Learn about the problematic C concepts too useful to discard Solve C's string-building problems with C-standard functions Use modern syntactic features for functions that take structured inputs Build high-level, object-based libraries and programs Perform advanced math, talk to

internet servers, and run databases with existing C libraries This edition also includes new material on concurrent threads, virtual tables, C99 numeric types, and other features.

A Primer on Scientific Programming with Python
- Hans Petter Langtangen 2016-07-28

The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example and problem-oriented, where the applications are taken from mathematics, numerical calculus, statistics, physics, biology and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book.

Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science

and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science. From the reviews: Langtangen ... does an excellent job of introducing programming as a set of skills in problem solving. He guides the reader into thinking properly about producing program logic and data structures for modeling real-world problems using objects and functions and embracing the object-oriented paradigm. ... Summing Up: Highly recommended. F. H. Wild III, Choice, Vol. 47 (8), April 2010 Those of us who have learned scientific programming in Python 'on the streets' could be a little jealous of students who have the opportunity to take a course out of Langtangen's Primer." John D. Cook, The Mathematical Association of America, September 2011 This book goes through Python in particular, and programming in general, via tasks that scientists will likely perform. It

contains valuable information for students new to scientific computing and would be the perfect bridge between an introduction to programming and an advanced course on numerical methods or computational science. Alex Small, IEEE, CiSE Vol. 14 (2), March /April 2012 "This fourth edition is a wonderful, inclusive textbook that covers pretty much everything one needs to know to go from zero to fairly sophisticated scientific programming in Python..." Joan Horvath, Computing Reviews, March 2015 **Finite Difference Computing with PDEs** - Hans Petter Langtangen 2017-06-21 This book is open access under a CC BY 4.0 license. This easy-to-read book introduces the basics of solving partial differential equations by means of finite difference methods. Unlike many of the traditional academic works on the topic, this book was written for practitioners. Accordingly, it especially addresses: the construction of finite difference schemes, formulation and implementation of algorithms,

verification of implementations, analyses of physical behavior as implied by the numerical

solutions, and how to apply the methods and software to solve problems in the fields of physics and biology.