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Summary Linux in Action is a task-based tutorial that will give you the skills and deep understanding you need to administer a Linux-based system. This hands-on book guides you through 12 real-world projects so you can practice as you learn. Each chapter ends with a review of best practices, new terms, and exercises. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology You can't learn anything without getting your hands dirty— Linux including Linux. Skills like securing files, folders, and servers, safely installing patches and applications, and managing a network are required for any serious user, including developers, administrators, and DevOps professionals. With this hands-on tutorial, you'll roll up your sleeves and learn Linux project by project. About the Book Linux in Action guides you through 12 real-world projects, including automating a backup-and-restore system, setting up a private Dropbox-style file cloud, and building your own MediaWiki server. You'll try out interesting examples as you lock in core practices like virtualization, disaster recovery, security, backup, DevOps, and system troubleshooting. Each chapter ends with a review of best practices, new terms, and exercises. What's inside Setting up a safe Linux environment Managing secure remote connectivity Building a system recovery device Patching and upgrading your system About the Reader No prior Linux admin experience is required. About the Author David Clinton is a certified Linux Server Professional, seasoned instructor, and author of Manning's bestselling Learn Amazon Web Services in a Month of Lunches. Table of Contents Welcome to Linux Linux virtualization: Building a Linux working environment Remote connectivity: Safely accessing networked machines Archive management: Backing up or copying entire file systems Automated administration: Configuring automated offsite backups Emergency tools: Building a system recovery device Web servers: Building a MediaWiki server Networked file sharing: Building a Nextcloud file-sharing server Securing your web server Securing network connections: Creating a VPN or DMZ System monitoring: Working with log files Sharing data over a private network Troubleshooting system performance issues Troubleshooting network issues Troubleshooting peripheral devices DevOps tools: Deploying a scripted server environment using Ansible Summary Serious developers know that code can always be improved. With each iteration, you make optimizations—small and large—that can have a huge impact on your application's speed, size, resilience, and maintainability. In Seriously Good Software: Code that Works, Survives, and Wins, author, teacher, and Java expert Marco Faella teaches you techniques for writing better code. You'll start with a simple application and follow it through seven careful refactorings, each designed to explore another dimension of quality. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Great code blends the skill of a programmer with the time-tested techniques and best practices embraced by the entire development community. Although each application has its own context and character, some dimensions of quality are always important. This book concentrates on eight pillars of seriously good software: speed, memory usage, reliability, readability, thread safety, generality, and elegance. The Java-based examples demonstrate techniques that apply to any OO language. About the book Seriously Good Software is a handbook for any professional developer serious about improving application

quality. It explores fundamental dimensions of code quality by enhancing a simple implementation into a robust, professional-quality application. Questions, exercises, and Java-based examples ensure you'll get a firm grasp of the concepts as you go. When you finish the last version of the book's central project, you'll be able to confidently choose the right optimizations for your code. What's inside Evaluating software qualities Assessing trade-offs and interactions Fulfilling different objectives in a single task Java-based exercises you can apply in any OO language About the reader For web developers comfortable with JavaScript and HTML. About the author Marco Faella teaches advanced programming at a major Italian university. His published work includes peer-reviewed research articles, a Java certification manual, and a video course. Table of Contents *Part 1: Preliminaries * 1 Software qualities and a problem to solve 2 Reference implementation *Part 2: Software Qualities* 3 Need for speed: Time efficiency 4 Precious memory: Space efficiency 5 Self-conscious code: Reliability through monitoring 6 Lie to me: Reliability through testing 7 Coding aloud: Readability 8 Many cooks in the kitchen: Thread safety 9 Please recycle: Reusability In Math for Programmers you'll explore important mathematical concepts through hands-on coding. Filled with graphics and more than 300 exercises and mini-projects, this book unlocks the door to interesting—and lucrative!—careers in some of today's hottest fields. As you tackle the basics of linear algebra, calculus, and machine learning, you'll master the key Python libraries used to turn them into real-world software applications. Summary To score a job in data science, machine learning, computer graphics, and cryptography, you need to bring strong math skills to the party. Math for Programmers teaches the math you need for these hot careers, concentrating on what you need to know as a developer. Filled with lots of helpful graphics and more than 200 exercises and mini-projects, this book unlocks the door to interesting—and lucrative!—careers in some of today's hottest programming fields. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Skip the mathematical jargon: This one-of-a-kind book uses Python to teach the math you need to build games, simulations, 3D graphics, and machine learning algorithms. Discover how algebra and calculus come alive when you see them in code! About the book In Math for Programmers you'll explore important mathematical concepts through hands-on coding. Filled with graphics and more than 300 exercises and mini-projects, this book unlocks the door to interesting—and lucrative!—careers in some of today's hottest fields. As you tackle the basics of linear algebra, calculus, and machine learning, you'll master the key Python libraries used to turn them into real-world software applications. What's inside Vector geometry for computer graphics Matrices and linear transformations Core concepts from calculus Simulation and optimization Image and audio processing Machine learning algorithms for regression and classification About the reader For programmers with basic skills in algebra. About the author Paul Orland is a programmer, software entrepreneur, and math enthusiast. He is co-founder of Tachyus, a start-up building predictive analytics software for the energy industry. You can find him online at www.paulor.land. Table of Contents 1 Learning math with code PART I - VECTORS AND GRAPHICS 2 Drawing with 2D vectors 3 Ascending to the 3D world 4 Transforming vectors and graphics 5 Computing transformations with matrices 6 Generalizing to higher dimensions 7 Solving systems of linear equations PART 2 - CALCULUS AND PHYSICAL SIMULATION 8 Understanding rates of change 9 Simulating moving objects 10 Working with symbolic expressions 11 Simulating force fields 12 Optimizing a physical system 13 Analyzing sound waves with a Fourier series PART 3 - MACHINE LEARNING APPLICATIONS 14 Fitting functions to data 15 Classifying data with logistic regression 16 Training neural networks “We finally have the definitive treatise on PyTorch! It covers the basics and abstractions in great detail. I hope this book becomes your extended reference document.” —Soumith Chintala, co-creator of PyTorch Key Features Written by PyTorch's creator and key contributors Develop deep learning models in a familiar Pythonic way Use PyTorch to build an image classifier for cancer detection Diagnose problems with your neural network and improve training with data augmentation Purchase of the print book includes a free eBook in PDF,

Kindle, and ePub formats from Manning Publications. About The Book Every other day we hear about new ways to put deep learning to good use: improved medical imaging, accurate credit card fraud detection, long range weather forecasting, and more. PyTorch puts these superpowers in your hands. Instantly familiar to anyone who knows Python data tools like NumPy and Scikit-learn, PyTorch simplifies deep learning without sacrificing advanced features. It's great for building quick models, and it scales smoothly from laptop to enterprise. Deep Learning with PyTorch teaches you to create deep learning and neural network systems with PyTorch. This practical book gets you to work right away building a tumor image classifier from scratch. After covering the basics, you'll learn best practices for the entire deep learning pipeline, tackling advanced projects as your PyTorch skills become more sophisticated. All code samples are easy to explore in downloadable Jupyter notebooks. What You Will Learn Understanding deep learning data structures such as tensors and neural networks Best practices for the PyTorch Tensor API, loading data in Python, and visualizing results Implementing modules and loss functions Utilizing pretrained models from PyTorch Hub Methods for training networks with limited inputs Sifting through unreliable results to diagnose and fix problems in your neural network Improve your results with augmented data, better model architecture, and fine tuning This Book Is Written For For Python programmers with an interest in machine learning. No experience with PyTorch or other deep learning frameworks is required. About The Authors Eli Stevens has worked in Silicon Valley for the past 15 years as a software engineer, and the past 7 years as Chief Technical Officer of a startup making medical device software. Luca Antiga is co-founder and CEO of an AI engineering company located in Bergamo, Italy, and a regular contributor to PyTorch. Thomas Viehmann is a Machine Learning and PyTorch speciality trainer and consultant based in Munich, Germany and a PyTorch core developer. Table of Contents PART 1 - CORE PYTORCH 1 Introducing deep learning and the PyTorch Library 2 Pretrained networks 3 It starts with a tensor 4 Real-world data representation using tensors 5 The mechanics of learning 6 Using a neural network to fit the data 7 Telling birds from airplanes: Learning from images 8 Using convolutions to generalize PART 2 - LEARNING FROM IMAGES IN THE REAL WORLD: EARLY DETECTION OF LUNG CANCER 9 Using PyTorch to fight cancer 10 Combining data sources into a unified dataset 11 Training a classification model to detect suspected tumors 12 Improving training with metrics and augmentation 13 Using segmentation to find suspected nodules 14 End-to-end nodule analysis, and where to go next PART 3 - DEPLOYMENT 15 Deploying to production Summary Introducing Data Science teaches you how to accomplish the fundamental tasks that occupy data scientists. Using the Python language and common Python libraries, you'll experience firsthand the challenges of dealing with data at scale and gain a solid foundation in data science. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Many companies need developers with data science skills to work on projects ranging from social media marketing to machine learning. Discovering what you need to learn to begin a career as a data scientist can seem bewildering. This book is designed to help you get started. About the Book Introducing Data Science Introducing Data Science explains vital data science concepts and teaches you how to accomplish the fundamental tasks that occupy data scientists. You'll explore data visualization, graph databases, the use of NoSQL, and the data science process. You'll use the Python language and common Python libraries as you experience firsthand the challenges of dealing with data at scale. Discover how Python allows you to gain insights from data sets so big that they need to be stored on multiple machines, or from data moving so quickly that no single machine can handle it. This book gives you hands-on experience with the most popular Python data science libraries, Scikit-learn and StatsModels. After reading this book, you'll have the solid foundation you need to start a career in data science. What's Inside Handling large data Introduction to machine learning Using Python to work with data Writing data science algorithms About the Reader This book assumes you're comfortable reading code in Python or a similar language, such as C, Ruby, or JavaScript. No prior experience with data science is required. About the Authors Davy Cielen, Arno D. B. Meysman, and Mohamed Ali are the founders and managing partners of Optimately and Maiton, where they focus on developing data science projects and solutions in various sectors. Table of Contents Data science in a big data world The data science process Machine learning Handling large data on a single computer First steps in big data Join the NoSQL movement The rise of graph databases Text mining and text analytics Data visualization to the end user Summary Machine

Learning in Action is unique book that blends the foundational theories of machine learning with the practical realities of building tools for everyday data analysis. You'll use the flexible Python programming language to build programs that implement algorithms for data classification, forecasting, recommendations, and higher-level features like summarization and simplification. About the Book A machine is said to learn when its performance improves with experience. Learning requires algorithms and programs that capture data and ferret out the interesting or useful patterns. Once the specialized domain of analysts and mathematicians, machine learning is becoming a skill needed by many. Machine Learning in Action is a clearly written tutorial for developers. It avoids academic language and takes you straight to the techniques you'll use in your day-to-day work. Many (Python) examples present the core algorithms of statistical data processing, data analysis, and data visualization in code you can reuse. You'll understand the concepts and how they fit in with tactical tasks like classification, forecasting, recommendations, and higher-level features like summarization and simplification. Readers need no prior experience with machine learning or statistical processing. Familiarity with Python is helpful. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside A no-nonsense introduction Examples showing common ML tasks Everyday data analysis Implementing classic algorithms like Apriori and Adaboos Table of Contents PART 1 CLASSIFICATION Machine learning basics Classifying with k-Nearest Neighbors Splitting datasets one feature at a time: decision trees Classifying with probability theory: naïve Bayes Logistic regression Support vector machines Improving classification with the AdaBoost meta algorithm PART 2 FORECASTING NUMERIC VALUES WITH REGRESSION Predicting numeric values: regression Tree-based regression PART 3 UNSUPERVISED LEARNING Grouping unlabeled items using k-means clustering Association analysis with the Apriori algorithm Efficiently finding frequent itemsets with FP-growth PART 4 ADDITIONAL TOOLS Using principal component analysis to simplify data Simplifying data with the singular value decomposition Big data and MapReduce Summary Learn Git in a Month of Lunches introduces the discipline of source code control using Git. Whether you're a newbie or a busy pro moving your source control to Git, you'll appreciate how this book concentrates on the components of Git you'll use every day. In easy-to-follow lessons designed to take an hour or less, you'll dig into Git's distributed collaboration model, along with core concepts like committing, branching, and merging. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book Git is the source code control system preferred by modern development teams. Its decentralized architecture and lightning-fast branching let you concentrate on your code instead of tedious version control tasks. At first, Git may seem like a sprawling beast. Fortunately, to get started you just need to master a few essential techniques. Read on! Learn Git in a Month of Lunches introduces the discipline of source code control using Git. Helpful for both newbies who have never used source control and busy pros, this book concentrates on the components of Git you'll use every day. In easy-to-follow lessons that take an hour or less, you'll dig into Git's distributed collaboration model, along with core concepts like committing, branching, and merging. This book is a road map to the commands and processes you need to be instantly productive. What's Inside Start from square one—no experience required The most frequently used Git commands Mental models that show how Git works Learn when and how to branch code About the Reader No previous experience with Git or other source control systems is required. About the Author Rick Umali uses Git daily as a developer and is a skilled consultant, trainer, and speaker. Table of Contents Before you begin An overview of Git and version control Getting oriented with Git Making and using a Git repository Using Git with a GUI Tracking and updating files in Git Committing parts of changes The time machine that is Git Taking a fork in the road Merging branches Cloning Collaborating with remotes Pushing your changes Keeping in sync Software archaeology Understanding git rebase Workflows and branching conventions Working with GitHub Third-party tools and Git Sharpening your Git Class-tested and coherent, this textbook teaches classical and web information retrieval, including web search and the related areas of text classification and text clustering from basic concepts. It gives an up-to-date treatment of all aspects of the design and implementation of systems for gathering, indexing, and searching documents; methods for evaluating systems; and an introduction to the use of machine learning methods on text collections. All the important ideas are explained using examples and figures, making it perfect for introductory courses in information retrieval for

advanced undergraduates and graduate students in computer science. Based on feedback from extensive classroom experience, the book has been carefully structured in order to make teaching more natural and effective. Slides and additional exercises (with solutions for lecturers) are also available through the book's supporting website to help course instructors prepare their lectures. Summary

Elastic leadership is a framework and philosophy that can help you as you manage day-to-day and long-term challenges and strive to create the elusive self-organizing team. It is about understanding that your leadership needs to change based on which phase you discover that your team is in. This book provides you with a set of values, techniques, and practices to use in your leadership role. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Your team looks to you for guidance. You have to mediate heated debates. The team is constantly putting out fires instead of doing the right things, the right way. Everyone seems to want to do things correctly, but nobody seems to be doing so. This is where leaders get stuck. It's time to get unstuck! Elastic leadership is a novel approach that helps you adapt your leadership style to the phase your team is in, so you can stay in step as things change. About the Book Elastic Leadership is a practical, experience-driven guide to team leadership. In it, you'll discover a set of values, techniques, and practices to lead your team to success. First, you'll learn what elastic leadership is and explore the phases of this results-oriented framework. Then, you'll see it in practice through stories, anecdotes, and advice provided by successful leaders in a variety of disciplines, all annotated by author and experienced team leader, Roy Osherove. What's Inside Understanding why people do what they do Effective coaching Influencing team members and managers Advice from industry leaders About the Reader This book is for anyone with a year or more of experience working on a team as a lead or team member. About the Author Roy Osherove is the DevOps process lead for the West Coast at EMC, based in California. He is also the author of *The Art of Unit Testing* (Manning, 2013) and *Enterprise DevOps*. He consults and trains teams worldwide on the gentle art of leadership, unit testing, test-driven development, and continuous-delivery automation. He frequently speaks at international conferences on these topics and others. Table of Contents PART 1 - UNDERSTANDING ELASTIC LEADERSHIP Striving toward a Team Leader Manifesto Matching leadership styles to team phases Dealing with bus factors PART 2 - SURVIVAL MODE Dealing with survival mode PART 3 - LEARNING MODE Learning to learn Commitment language Growing people PART 4 - SELF-ORGANIZATION MODE Using clearing meetings to advance self-organization Influence patterns The Line Manager Manifesto PART 5 - NOTES TO A SOFTWARE TEAM LEADER Feeding back Channel conflict into learning It's probably not a technical problem Review the code Document your air, food, and water Appraisals and agile don't play nicely Leading through learning: the responsibilities of a team leader Introduction to the Core Protocols Change your mind: your product is your team Leadership and the mature team Spread your workload Making your team manage their own work Go see, ask why, show respect Keep developers happy, reap high-quality work Stop doing their work Write code, but not too much Evolving from manager to leader Affecting the pace of change Proximity management Babel Fish You're the lead, not the know-it-all Actions speak louder than words Summary Go in Practice guides you through 70 real-world techniques in key areas like package management, microservice communication, and more. Following a cookbook-style Problem/Solution/Discussion format, this practical handbook builds on the foundational concepts of the Go language and introduces specific strategies you can use in your day-to-day applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Go may be the perfect systems language. Built with simplicity, concurrency, and modern applications in mind, Go provides the core tool set for rapidly building web, cloud, and systems applications. If you know a language like Java or C#, it's easy to get started with Go; the trick is finding the practical dirt-under-the-fingernails techniques that you need to build production-ready code. About the Book Go in Practice guides you through dozens of real-world techniques in key areas. Following a cookbook-style Problem/Solution/Discussion format, this practical handbook builds on the foundational concepts of the Go language and introduces specific strategies you can use in your day-to-day applications. You'll learn techniques for building web services, using Go in the cloud, testing and debugging, routing, network applications, and much more. After finishing this book, you will be ready to build sophisticated cloud-native Go applications. What's Inside Dozens of specific, practical Golang techniques Using Go for

devops and cloudops Writing RESTful web services and microservices Practical web dev techniques About the Reader Written for experienced developers who have already started exploring Go and want to use it effectively in a production setting. About the Authors Matt Farina is a software architect at Deis. Matt Butcher is a Principal Engineer in the Advanced Technology Group at Hewlett Packard Enterprise. They are both authors, speakers, and regular open source contributors. Table of Contents PART 1 - BACKGROUND AND FUNDAMENTALS Getting into Go A solid foundation Concurrency in Go PART 2 - WELL-ROUNDED APPLICATIONS Handling errors and panic Debugging and testing PART 3 - AN INTERFACE FOR YOUR APPLICATIONS HTML and email template patterns Serving and receiving assets and forms Working with web services PART 4 - TAKING YOUR APPLICATIONS TO THE CLOUD Using the cloud Communication between cloud services Reflection and code generation "Tiny Python Projects is a gentle and amusing introduction to Python that will firm up key programming concepts while also making you giggle."—Amanda Debler, Schaeffler Key Features Learn new programming concepts through 21-bitesize programs Build an insult generator, a Tic-Tac-Toe AI, a talk-like-a-pirate program, and more Discover testing techniques that will make you a better programmer Code-along with free accompanying videos on YouTube Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book The 21 fun-but-powerful activities in Tiny Python Projects teach Python fundamentals through puzzles and games. You'll be engaged and entertained with every exercise, as you learn about text manipulation, basic algorithms, and lists and dictionaries, and other foundational programming skills. Gain confidence and experience while you create each satisfying project. Instead of going quickly through a wide range of concepts, this book concentrates on the most useful skills, like text manipulation, data structures, collections, and program logic with projects that include a password creator, a word rhymer, and a Shakespearean insult generator. Author Ken Youens-Clark also teaches you good programming practice, including writing tests for your code as you go. What You Will Learn Write command-line Python programs Manipulate Python data structures Use and control randomness Write and run tests for programs and functions Download testing suites for each project This Book Is Written For For readers familiar with the basics of Python programming. About The Author Ken Youens-Clark is a Senior Scientific Programmer at the University of Arizona. He has an MS in Biosystems Engineering and has been programming for over 20 years. Table of Contents 1 How to write and test a Python program 2 The crow's nest: Working with strings 3 Going on a picnic: Working with lists 4 Jump the Five: Working with dictionaries 5 Howler: Working with files and STDOUT 6 Words count: Reading files and STDIN, iterating lists, formatting strings 7 Gashlycrumb: Looking items up in a dictionary 8 Apples and Bananas: Find and replace 9 Dial-a-Curse: Generating random insults from lists of words 10 Telephone: Randomly mutating strings 11 Bottles of Beer Song: Writing and testing functions 12 Ransom: Randomly capitalizing text 13 Twelve Days of Christmas: Algorithm design 14 Rhymer: Using regular expressions to create rhyming words 15 The Kentucky Friar: More regular expressions 16 The Scrambler: Randomly reordering the middles of words 17 Mad Libs: Using regular expressions 18 Gematria: Numeric encoding of text using ASCII values 19 Workout of the Day: Parsing CSV files, creating text table output 20 Password strength: Generating a secure and memorable password 21 Tic-Tac-Toe: Exploring state 22 Tic-Tac-Toe redux: An interactive version with type hints Summary HTTP/2 in Action is a complete guide to HTTP/2, one of the core protocols of the web. Because HTTP/2 has been designed to be easy to transition to, including keeping it backwards compatible, adoption is rapid and expected to increase over the next few years. Concentrating on practical matters, this interesting book presents key HTTP/2 concepts such as frames, streams, and multiplexing and explores how they affect the performance and behavior of your websites. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology HTTP—Hypertext Transfer Protocol—is the standard for exchanging messages between websites and browsers. And after 20 years, it's gotten a much-needed upgrade. With support for streams, server push, header compression, and prioritization, HTTP/2 delivers vast improvements in speed, security, and efficiency. About the Book HTTP/2 in Action teaches you everything you need to know to use HTTP/2 effectively. You'll learn how to optimize web performance with new features like frames, multiplexing, and push. You'll also explore real-world examples on advanced topics like flow control and dependencies. With ready-to-implement tips and best practices, this practical guide is sure to get you—and your websites—up

to speed! What's Inside HTTP/2 for web developers Upgrading and troubleshooting Real-world examples and case studies QUIC and HTTP/3 About the Reader Written for web developers and site administrators. About the Authors Barry Pollard is a professional developer with two decades of experience developing, supporting, and tuning software and infrastructure. Table of Contents PART 1 MOVING TO HTTP/2 Web technologies and HTTP The road to HTTP/2 Upgrading to HTTP/2 PART 2 USING HTTP/2 HTTP/2 protocol basics Implementing HTTP/2 push Optimizing for HTTP/2 PART 3 ADVANCED HTTP/2 Advanced HTTP/2 concepts HPACK header compression PART 4 THE FUTURE OF HTTP TCP, QUIC, and HTTP/3 Where HTTP goes from here Summary Secure by Design teaches developers how to use design to drive security in software development. This book is full of patterns, best practices, and mindsets that you can directly apply to your real world development. You'll also learn to spot weaknesses in legacy code and how to address them. About the technology Security should be the natural outcome of your development process. As applications increase in complexity, it becomes more important to bake security-mindedness into every step. The secure-by-design approach teaches best practices to implement essential software features using design as the primary driver for security. About the book Secure by Design teaches you principles and best practices for writing highly secure software. At the code level, you'll discover security-promoting constructs like safe error handling, secure validation, and domain primitives. You'll also master security-centric techniques you can apply throughout your build-test-deploy pipeline, including the unique concerns of modern microservices and cloud-native designs. What's inside Secure-by-design concepts Spotting hidden security problems Secure code constructs Assessing security by identifying common design flaws Securing legacy and microservices architectures About the reader Readers should have some experience in designing applications in Java, C#, .NET, or a similar language. About the author Dan Bergh Johnsson, Daniel Deogun, and Daniel Sawano are acclaimed speakers who often present at international conferences on topics of high-quality development, as well as security and design. Introduces the programming language's syntax, control flow, and basic data structures and covers its interaction with applications and management of large collections of code. Summary Dart in Action introduces Google's Dart language and provides techniques and examples showing how to use it as a viable replacement for Java and JavaScript in browser-based desktop and mobile applications. It begins with a rapid overview of Dart language and tools, including features like interacting with the browser, optional typing, classes, libraries, and concurrency with isolates. After you master the core concepts, you'll move on to running Dart on the server and creating single page HTML5 web applications. About the Technology Dart is a web programming language developed by Google. It has modern OO features, just like Java or C#, while keeping JavaScript's dynamic and functional characteristics. Dart applications are "transpiled" to JavaScript, and they run natively in Dart-enabled browsers. With production-quality libraries and tools, Dart operates on both the client and the server for a consistent development process. About this Book Dart in Action introduces the Dart language and teaches you to use it in browser-based, desktop, and mobile applications. Not just a language tutorial, this book gets quickly into the nitty-gritty of using Dart. Most questions that pop up while you're reading are answered on the spot! OO newbies will appreciate the gentle pace in the early chapters. Later chapters take a test-first approach and encourage you to try Dart hands-on. To benefit from this book you'll need experience with HTML and JavaScript? a Java or C# background is helpful but not required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Dart from the ground up Numerous code samples and diagrams Creating single-page web apps Transitioning from Java, C#, or JavaScript Running Dart in the browser and on the server About the Author Chris Buckett builds enterprise-scale web applications. He runs Dartwatch.com and is an active contributor to the dartlang list. "Includes numerous examples of core language features as well as more advanced HTML5 features."-;From the Foreword by Seth Ladd, Developer Advocate, Google Table of Contents PART 1 INTRODUCING DART Hello Dart "Hello World" with Dart tools Building and testing your own Dart app PART 2 CORE DART Functional first-class functions and closures Understanding libraries and privacy Constructing classes and interfaces Extending classes and interfaces Collections of richer classes Asynchronous programming with callbacks and futures PART 3 CLIENT-SIDE DART APPS Building a Dart web app Navigating offline data Communicating with other systems and languages PART 4 SERVER-SIDE DART Server interaction with files and HTTP Sending, syncing, and storing data

Concurrency with isolates Summary Revised and updated for Elixir 1.7, Elixir in Action, Second Edition teaches you how to apply Elixir to practical problems associated with scalability, fault tolerance, and high availability. Along the way, you'll develop an appreciation for, and considerable skill in, a functional and concurrent style of programming. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology When you're building mission-critical software, fault tolerance matters. The Elixir programming language delivers fast, reliable applications, whether you're building a large-scale distributed system, a set of backend services, or a simple web app. And Elixir's elegant syntax and functional programming mindset make your software easy to write, read, and maintain. About the Book Elixir in Action, Second Edition teaches you how to build production-quality distributed applications using the Elixir programming language. Author Saša Jurić introduces this powerful language using examples that highlight the benefits of Elixir's functional and concurrent programming. You'll discover how the OTP framework can radically reduce tedious low-level coding tasks. You'll also explore practical approaches to concurrency as you learn to distribute a production system over multiple machines. What's inside Updated for Elixir 1.7 Functional and concurrent programming Introduction to distributed system design Creating deployable releases About the Reader You'll need intermediate skills with client/server applications and a language like Java, C#, or Ruby. No previous experience with Elixir required. About the Author Saša Jurić is a developer with extensive experience using Elixir and Erlang in complex server-side systems. Table of Contents First steps Building blocks Control flow Data abstractions Concurrency primitives Generic server processes Building a concurrent system Fault-tolerance basics Isolating error effects Beyond GenServer Working with components Building a distributed system Running the system Summary Go in Action introduces the Go language, guiding you from inquisitive developer to Go guru. The book begins by introducing the unique features and concepts of Go. Then, you'll get hands-on experience writing real-world applications including websites and network servers, as well as techniques to manipulate and convert data at speeds that will make your friends jealous. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Application development can be tricky enough even when you aren't dealing with complex systems programming problems like web-scale concurrency and real-time performance. While it's possible to solve these common issues with additional tools and frameworks, Go handles them right out of the box, making for a more natural and productive coding experience. Developed at Google, Go powers nimble startups as well as big enterprises—companies that rely on high-performing services in their infrastructure. About the Book Go in Action is for any intermediate-level developer who has experience with other programming languages and wants a jump-start in learning Go or a more thorough understanding of the language and its internals. This book provides an intensive, comprehensive, and idiomatic view of Go. It focuses on the specification and implementation of the language, including topics like language syntax, Go's type system, concurrency, channels, and testing. What's Inside Language specification and implementation Go's type system Internals of Go's data structures Testing and benchmarking About the Reader This book assumes you're a working developer proficient with another language like Java, Ruby, Python, C#, or C++. About the Authors William Kennedy is a seasoned software developer and author of the blog GoingGo.Net. Brian Ketelsen and Erik St. Martin are the organizers of GopherCon and coauthors of the Go-based Skynet framework. Table of Contents Introducing Go Go quick-start Packaging and tooling Arrays, slices, and maps Go's type system Concurrency Concurrency patterns Standard library Testing and benchmarking Learn data science with Python by building five real-world projects! Experiment with card game predictions, tracking disease outbreaks, and more, as you build a flexible and intuitive understanding of data science. In Data Science Bookcamp you will learn: - Techniques for computing and plotting probabilities - Statistical analysis using Scipy - How to organize datasets with clustering algorithms - How to visualize complex multi-variable datasets - How to train a decision tree machine learning algorithm In Data Science Bookcamp you'll test and build your knowledge of Python with the kind of open-ended problems that professional data scientists work on every day. Downloadable data sets and thoroughly-explained solutions help you lock in what you've learned, building your confidence and making you ready for an exciting new data science career. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology A data science project has a lot of moving parts, and it takes practice

and skill to get all the code, algorithms, datasets, formats, and visualizations working together harmoniously. This unique book guides you through five realistic projects, including tracking disease outbreaks from news headlines, analyzing social networks, and finding relevant patterns in ad click data. About the book Data Science Bookcamp doesn't stop with surface-level theory and toy examples. As you work through each project, you'll learn how to troubleshoot common problems like missing data, messy data, and algorithms that don't quite fit the model you're building. You'll appreciate the detailed setup instructions and the fully explained solutions that highlight common failure points. In the end, you'll be confident in your skills because you can see the results. What's inside - Web scraping - Organize datasets with clustering algorithms - Visualize complex multi-variable datasets - Train a decision tree machine learning algorithm About the reader For readers who know the basics of Python. No prior data science or machine learning skills required. About the author Leonard Apeltsin is the Head of Data Science at Anomaly, where his team applies advanced analytics to uncover healthcare fraud, waste, and abuse. Table of Contents CASE STUDY 1 FINDING THE WINNING STRATEGY IN A CARD GAME 1 Computing probabilities using Python 2 Plotting probabilities using Matplotlib 3 Running random simulations in NumPy 4 Case study 1 solution CASE STUDY 2 ASSESSING ONLINE AD CLICKS FOR SIGNIFICANCE 5 Basic probability and statistical analysis using SciPy 6 Making predictions using the central limit theorem and SciPy 7 Statistical hypothesis testing 8 Analyzing tables using Pandas 9 Case study 2 solution CASE STUDY 3 TRACKING DISEASE OUTBREAKS USING NEWS HEADLINES 10 Clustering data into groups 11 Geographic location visualization and analysis 12 Case study 3 solution CASE STUDY 4 USING ONLINE JOB POSTINGS TO IMPROVE YOUR DATA SCIENCE RESUME 13 Measuring text similarities 14 Dimension reduction of matrix data 15 NLP analysis of large text datasets 16 Extracting text from web pages 17 Case study 4 solution CASE STUDY 5 PREDICTING FUTURE FRIENDSHIPS FROM SOCIAL NETWORK DATA 18 An introduction to graph theory and network analysis 19 Dynamic graph theory techniques for node ranking and social network analysis 20 Network-driven supervised machine learning 21 Training linear classifiers with logistic regression 22 Training nonlinear classifiers with decision tree techniques 23 Case study 5 solution Summary Grokking Algorithms is a fully illustrated, friendly guide that teaches you how to apply common algorithms to the practical problems you face every day as a programmer. You'll start with sorting and searching and, as you build up your skills in thinking algorithmically, you'll tackle more complex concerns such as data compression and artificial intelligence. Each carefully presented example includes helpful diagrams and fully annotated code samples in Python. Learning about algorithms doesn't have to be boring! Get a sneak peek at the fun, illustrated, and friendly examples you'll find in Grokking Algorithms on Manning Publications' YouTube channel. Continue your journey into the world of algorithms with Algorithms in Motion, a practical, hands-on video course available exclusively at Manning.com (www.manning.com/livevideo/algorithms-in-motion). Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology An algorithm is nothing more than a step-by-step procedure for solving a problem. The algorithms you'll use most often as a programmer have already been discovered, tested, and proven. If you want to understand them but refuse to slog through dense multipage proofs, this is the book for you. This fully illustrated and engaging guide makes it easy to learn how to use the most important algorithms effectively in your own programs. About the Book Grokking Algorithms is a friendly take on this core computer science topic. In it, you'll learn how to apply common algorithms to the practical programming problems you face every day. You'll start with tasks like sorting and searching. As you build up your skills, you'll tackle more complex problems like data compression and artificial intelligence. Each carefully presented example includes helpful diagrams and fully annotated code samples in Python. By the end of this book, you will have mastered widely applicable algorithms as well as how and when to use them. What's Inside Covers search, sort, and graph algorithms Over 400 pictures with detailed walkthroughs Performance trade-offs between algorithms Python-based code samples About the Reader This easy-to-read, picture-heavy introduction is suitable for self-taught programmers, engineers, or anyone who wants to brush up on algorithms. About the Author Aditya Bhargava is a Software Engineer with a dual background in Computer Science and Fine Arts. He blogs on programming at adit.io. Table of Contents Introduction to algorithms Selection sort Recursion Quicksort Hash tables Breadth-first search Dijkstra's algorithm Greedy algorithms Dynamic programming K-nearest

neighbors Even small applications have dozens of components. Large applications may have thousands, which makes them challenging to install, maintain, and remove. Docker bundles all application components into a package called a container that keeps things tidy and helps manage any dependencies on other applications or infrastructure. Docker in Action, Second Edition teaches you the skills and knowledge you need to create, deploy, and manage applications hosted in Docker containers. This bestseller has been fully updated with new examples, best practices, and entirely new chapters. You'll start with a clear explanation of the Docker model and learn how to package applications in containers, including techniques for testing and distributing applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. AI as a Service is a practical handbook to building and implementing serverless AI applications, without bogging you down with a lot of theory. Instead, you'll find easy-to-digest instruction and two complete hands-on serverless AI builds in this must-have guide! Summary Companies everywhere are moving everyday business processes over to the cloud, and AI is increasingly being given the reins in these tasks. As this massive digital transformation continues, the combination of serverless computing and AI promises to become the de facto standard for business-to-consumer platform development—and developers who can design, develop, implement, and maintain these systems will be in high demand! AI as a Service is a practical handbook to building and implementing serverless AI applications, without bogging you down with a lot of theory. Instead, you'll find easy-to-digest instruction and two complete hands-on serverless AI builds in this must-have guide! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Cloud-based AI services can automate a variety of labor intensive business tasks in areas such as customer service, data analysis, and financial reporting. The secret is taking advantage of pre-built tools like Amazon Rekognition for image analysis or AWS Comprehend for natural language processing. That way, there's no need to build expensive custom software. Artificial Intelligence (AI), a machine's ability to learn and make predictions based on patterns it identifies, is already being leveraged by businesses around the world in areas like targeted product recommendations, financial forecasting and resource planning, customer service chatbots, healthcare diagnostics, data security, and more. With the exciting combination of serverless computing and AI, software developers now have enormous power to improve their businesses' existing systems and rapidly deploy new AI-enabled platforms. And to get on this fast-moving train, you don't have to invest loads of time and effort in becoming a data scientist or AI expert, thanks to cloud platforms and the readily available off-the-shelf cloud-based AI services! About the book AI as a Service is a fast-paced guide to harnessing the power of cloud-based solutions. You'll learn to build real-world apps—such as chatbots and text-to-speech services—by stitching together cloud components. Work your way from small projects to large data-intensive applications. What's inside - Apply cloud AI services to existing platforms - Design and build scalable data pipelines - Debug and troubleshoot AI services - Start fast with serverless templates About the reader For software developers familiar with cloud basics. About the author Peter Elger and Eóin Shanaghy are founders and CEO/CTO of fourTheorem, a software solutions company providing expertise on architecture, DevOps, and machine learning. Table of Contents PART 1 - FIRST STEPS 1 A tale of two technologies 2 Building a serverless image recognition system, part 1 3 Building a serverless image recognition system, part 2 PART 2 - TOOLS OF THE TRADE 4 Building and securing a web application the serverless way 5 Adding AI interfaces to a web application 6 How to be effective with AI as a Service 7 Applying AI to existing platforms PART 3 - BRINGING IT ALL TOGETHER 8 Gathering data at scale for real-world AI 9 Extracting value from large data sets with AI Summary Grokking Deep Learning teaches you to build deep learning neural networks from scratch! In his engaging style, seasoned deep learning expert Andrew Trask shows you the science under the hood, so you grok for yourself every detail of training neural networks. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Deep learning, a branch of artificial intelligence, teaches computers to learn by using neural networks, technology inspired by the human brain. Online text translation, self-driving cars, personalized product recommendations, and virtual voice assistants are just a few of the exciting modern advancements possible thanks to deep learning. About the Book Grokking Deep Learning teaches you to build deep learning neural networks from scratch! In his engaging style, seasoned deep learning expert Andrew Trask shows you the science under the hood, so you

grok for yourself every detail of training neural networks. Using only Python and its math-supporting library, NumPy, you'll train your own neural networks to see and understand images, translate text into different languages, and even write like Shakespeare! When you're done, you'll be fully prepared to move on to mastering deep learning frameworks. What's inside The science behind deep learning Building and training your own neural networks Privacy concepts, including federated learning Tips for continuing your pursuit of deep learning About the Reader For readers with high school-level math and intermediate programming skills. About the Author Andrew Trask is a PhD student at Oxford University and a research scientist at DeepMind. Previously, Andrew was a researcher and analytics product manager at Digital Reasoning, where he trained the world's largest artificial neural network and helped guide the analytics roadmap for the Synthesys cognitive computing platform. Table of Contents Introducing deep learning: why you should learn it Fundamental concepts: how do machines learn? Introduction to neural prediction: forward propagation Introduction to neural learning: gradient descent Learning multiple weights at a time: generalizing gradient descent Building your first deep neural network: introduction to backpropagation How to picture neural networks: in your head and on paper Learning signal and ignoring noise: introduction to regularization and batching Modeling probabilities and nonlinearities: activation functions Neural learning about edges and corners: intro to convolutional neural networks Neural networks that understand language: king - man + woman == ? Neural networks that write like Shakespeare: recurrent layers for variable-length data Introducing automatic optimization: let's build a deep learning framework Learning to write like Shakespeare: long short-term memory Deep learning on unseen data: introducing federated learning Where to go from here: a brief guide Make Your Time Right gives a core and detailed insight about Time management, Routine, Focus, Priority & Financial Independence. Make Your Time Right is a highly motivating book that constitutes stories that instigate being on the right life track. Each topic is covered in a very articulate manner to understand the critical, relevant life-changing factors. Life principles against each subject are immensely engaging and will set one on the path of growth and affluence. Get life-changing answers to questions that one has always wondered about. How to Build a Rock-Solid Routine? How to get an undeterred Focus in this distracting world? How to win over habits? How to stop blaming Time? How to know what the priority is? How to be free from thinking of income all the Time? It's a genuine self-help book with providing complete insight into the do's and don'ts of life for fuller success. I was not always a white girl. I used to be just Charlotte. A person named Charlotte Halsey. But when I met Milo, when I fell in love with him, I became White, like a lit light bulb is white. In the mirror there is my skin the color of sand, hair the color of butter, eyes blue as seawater. Just so bleached white I am practically clear. Milo is black, what they call "Black," only not to me. To me he has mostly been just Milo. They say lovers can find each other just by using the sense of smell; that we are all really animals in that way, no different from dogs or deer. I know it's true. I could find Milo blind in a room of men, the smell of him like pine trees in a snowy wind. I could pick him out just by the slow rising of his breath while he slept. So no, until this happened, up to the time of the assault, he was not black, not to me. He was Milo. He was my husband. - from Whitegirl As Kate Manning's riveting debut novel begins, a thirty-five-year-old white woman lies secluded in her home overlooking the Pacific, unable to speak, recovering from a violent assault that has nearly taken her life. Her husband, a famous black actor, is in jail for the crime. Is he guilty? She's not sure. She remembers nothing of the assault. Longing for answers, she sifts through the history of their life together, trying to determine how two people once so in love might find themselves so ruined. Charlotte Halsey and Milo Robicheaux met briefly in college in the 1970s, where she was a beautiful, troubled girl hungry for freedom, and he was the star athlete with Olympic dreams. Years later, when she is a successful model and he a famous sports hero turned actor, their paths cross again in New York City and they fall in love. But their marriage is soon fraught with tension. As Milo's celebrity skyrockets, motherhood ends Charlotte's career, leaving her increasingly alienated from the man she believed she knew so well. Jealousy and mistrust grow between them even as they strive to build a life together against increasing odds. A poignant anatomy of a marriage undone by the pressure of fame and the struggle for identity, Whitegirl is the arresting debut of a significant new voice in contemporary fiction. SQL Server 2005 Reporting Services in Action helps you build and manage flexible reporting solutions and develop report-enabled applications. In this clear, well-illustrated book, you'll follow a report from creation to publication. Along the way you'll

explore flexible delivery options like web-based, on-demand, and subscribed reports9complete with cool new features like direct printing and client-side sorting. For applications that require custom reporting, you'll learn to define reports with RDL and push them to the Report Server using the Report Manager Web Service API. You'll also see how to write server extensions to expand the range of data processing and report delivery options. Vert.x in Action teaches you how to build production-quality reactive applications in Java. This book covers core Vert.x concepts, as well as the fundamentals of asynchronous and reactive programming. Learn to develop microservices by using Vert.x tools for database communications, persistent messaging, and test app resiliency. The patterns and techniques included here transfer to reactive technologies and frameworks beyond Vert.x. Summary As enterprise applications become larger and more distributed, new architectural approaches like reactive designs, microservices, and event streams are required knowledge. The Vert.x framework provides a mature, rock-solid toolkit for building reactive applications using Java, Kotlin, or Scala. Vert.x in Action teaches you to build responsive, resilient, and scalable JVM applications with Vert.x using well-established reactive design patterns. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Vert.x is a collection of libraries for the Java virtual machine that simplify event-based and asynchronous programming. Vert.x applications handle tedious tasks like asynchronous communication, concurrent work, message and data persistence, plus they're easy to scale, modify, and maintain. Backed by the Eclipse Foundation and used by Red Hat and others, this toolkit supports code in a variety of languages. About the book Vert.x in Action teaches you how to build production-quality reactive applications in Java. This book covers core Vert.x concepts, as well as the fundamentals of asynchronous and reactive programming. Learn to develop microservices by using Vert.x tools for database communications, persistent messaging, and test app resiliency. The patterns and techniques included here transfer to reactive technologies and frameworks beyond Vert.x. What's inside Building reactive services Responding to external service failures Horizontal scaling Vert.x toolkit architecture and Vert.x testing Deploying with Docker and Kubernetes About the reader For intermediate Java web developers. About the author Julien Ponge is a principal software engineer at Red Hat, working on the Eclipse Vert.x project. Table of Contents PART 1 - FUNDAMENTALS OF ASYNCHRONOUS PROGRAMMING WITH VERT.X 1 Vert.x, asynchronous programming, and reactive systems 2 Verticles: The basic processing units of Vert.x 3 Event bus: The backbone of a Vert.x application 4 Asynchronous data and event streams 5 Beyond callbacks 6 Beyond the event bus PART 2 - DEVELOPING REACTIVE SERVICES WITH VERT.X 7 Designing a reactive application 8 The web stack 9 Messaging and event streaming with Vert.x 10 Persistent state management with databases 11 End-to-end real-time reactive event processing 12 Toward responsiveness with load and chaos testing 13 Final notes: Container-native Vert.x The Joy of JavaScript introduces techniques that turn JavaScript programmers into JavaScript pros. Summary Whether building interactive browser-based applications or creating server-side applications in Node, JavaScript is the most widely used language for web programming. With new features, language improvements, paradigms, and potential use cases appearing regularly, there's never been a more exciting time to be a JavaScript developer. In The Joy of JavaScript, author and JavaScript expert Luis Atencio teaches you key design concepts that lead to clean, lean, modular, and easy-to-maintain code. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology JavaScript is at the heart of web applications on the browser side and, via the popular Node.js runtime, it often powers the server side too. Simply put, the web runs on JavaScript. About the book The Joy of JavaScript introduces techniques that turn JavaScript programmers into JavaScript pros. You'll work with cutting edge APIs, language features, and coding styles to tackle tricky problems in an elegant manner. Along the way, you'll practice good object design, drive business logic with functional thinking, and untangle complex data flows. What's inside JavaScript's objects and module system Working with higher order functions Identifying and creating composable software Preparing for upcoming JavaScript features About the reader Written for experienced and passionate JavaScript developers. About the author Luis Atencio is a software engineer for Citrix Systems, author of Manning's Functional Programming in JavaScript, and co-author of Manning's RxJS in Action. Table of Contents 1 JavaScript reloaded PART 1 - OBJECTS 2 Inheritance-based object modeling 3 Linked, compositional object models PART 2 - FUNCTIONS 4 Writing composable, pure code 5 Higher-

kinded composition PART 3 - CODE 6 ECMAScript Modules 7 Hooked on metaprogramming PART 4 - DATA 8 Linear async flows 9 Stream programming Distributed across servers, difficult to test, and resistant to modification—modern software is complex. Grokking Simplicity is a friendly, practical guide that will change the way you approach software design and development. It introduces a unique approach to functional programming that explains why certain features of software are prone to complexity, and teaches you the functional techniques you can use to simplify these systems so that they're easier to test and debug. Available in PDF (ePub, kindle, and liveBook formats coming soon). about the technology Even experienced developers struggle with software systems that sprawl across distributed servers and APIs, are filled with redundant code, and are difficult to reliably test and modify. Adopting ways of thinking derived from functional programming can help you design and refactor your codebase in ways that reduce complexity, rather than encouraging it. Grokking Simplicity lays out how to use functional programming in a professional environment to write a codebase that's easier to test and reuse, has fewer bugs, and is better at handling the asynchronous nature of distributed systems. about the book In Grokking Simplicity, you'll learn techniques and, more importantly, a mindset that will help you tackle common problems that arise when software gets complex. Veteran functional programmer Eric Normand guides you to a crystal-clear understanding of why certain features of modern software are so prone to complexity and introduces you to the functional techniques you can use to simplify these systems so that they're easier to read, test, and debug. Through hands-on examples, exercises, and numerous self-assessments, you'll learn to organize your code for maximum reusability and internalize methods to keep unwanted complexity out of your codebase. Regardless of the language you're using, the ways of thinking in this book will help recognize problematic code and tame even the most complex software. what's inside Apply functional programming principles to reduce codebase complexity Work with data transformation pipelines for code that's easier to test and reuse Tools for modeling time to simplify asynchrony 60 exercises and 100 questions to test your knowledge about the reader For experienced programmers. Examples are in JavaScript. about the author Eric Normand has been a functional programmer since 2001 and has been teaching functional programming online and in person since 2007. Visit LispCast.com to see more of his credentials. Five Lines of Code teaches refactoring that's focused on concrete rules and getting any method down to five lines or less! There's no jargon or tricky automated-testing skills required, just easy guidelines and patterns illustrated by detailed code samples. In Five Lines of Code you will learn: The signs of bad code Improving code safely, even when you don't understand it Balancing optimization and code generality Proper compiler practices The Extract method, Introducing Strategy pattern, and many other refactoring patterns Writing stable code that enables change-by-addition Writing code that needs no comments Real-world practices for great refactoring Improving existing code—refactoring—is one of the most common tasks you'll face as a programmer. Five Lines of Code teaches you clear and actionable refactoring rules that you can apply without relying on intuitive judgements such as "code smells." Following the author's expert perspective—that refactoring and code smells can be learned by following a concrete set of principles—you'll learn when to refactor your code, what patterns to apply to what problem, and the code characteristics that indicate it's time for a rework. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Every codebase includes mistakes and inefficiencies that you need to find and fix. Refactor the right way, and your code becomes elegant, easy to read, and easy to maintain. In this book, you'll learn a unique approach to refactoring that implements any method in five lines or fewer. You'll also discover a secret most senior devs know: sometimes it's quicker to hammer out code and fix it later! About the book Five Lines of Code is a fresh look at refactoring for developers of all skill levels. In it, you'll master author Christian Clausen's innovative approach, learning concrete rules to get any method down to five lines—or less! You'll learn when to refactor, specific refactoring patterns that apply to most common problems, and characteristics of code that should be deleted altogether. What's inside The signs of bad code Improving code safely, even when you don't understand it Balancing optimization and code generality Proper compiler practices About the reader For developers of all skill levels. Examples use easy-to-read Typescript, in the same style as Java and C#. About the author Christian Clausen works as a Technical Agile Coach, teaching teams how to refactor code. Table of Contents 1 Refactoring refactoring 2 Looking under the hood of refactoring PART 1 LEARN BY

REFACTORING A COMPUTER GAME 3 Shatter long function 4 Make type codes work 5 Fuse similar code together 6 Defend the data PART 2 TAKING WHAT YOU HAVE LEARNED INTO THE REAL WORLD 7 Collaborate with the compiler 8 Stay away from comments 9 Love deleting code 10 Never be afraid to add code 11 Follow the structure in the code 12 Avoid optimizations and generality 13 Make bad code look bad 14 Wrapping up Get Programming: Learn to code with Python teaches you the basics of computer programming using the Python language. In this exercise-driven book, you'll be doing something on nearly every page as you work through 38 compact lessons and 7 engaging capstone projects. By exploring the crystal-clear illustrations, exercises that check your understanding as you go, and tips for what to try next, you'll start thinking like a programmer in no time. This book works perfectly alongside our video course Get Programming with Python in Motion, available exclusively at Manning.com: www.manning.com/livevideo/get-programming-with-python-in-motion Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. What's Inside Programming skills you can use in any language Learn to code—no experience required Learn Python, the language for beginners Dozens of exercises and examples help you learn by doing About the Reader No prior programming experience needed. Table of Contents LEARNING HOW TO PROGRAM Lesson 1 - Why should you learn how to program? 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This unique book teaches you concrete techniques rooted in cognitive science that will improve the way you learn and think about code. In The Programmer's Brain: What every programmer needs to know about cognition you will learn: Fast and effective ways to master new programming languages Speed reading skills to quickly comprehend new code Techniques to unravel the meaning of complex code Ways to learn new syntax and keep it memorized Writing code that is easy for others to read Picking the right names for your variables Making your codebase more understandable to newcomers Onboarding new developers to your team Learn how to optimize your brain's natural cognitive processes to read code more easily, write code faster, and pick up new languages in much less time. This book will help you through the confusion you feel when faced with strange and complex code, and explain a codebase in ways that can make a new team member productive in days! 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processes to be a better programmer. Techniques based in cognitive science make it possible to learn new languages faster, improve productivity, reduce the need for code rewrites, and more. This unique book will help you achieve these gains. About the book *The Programmer's Brain* unlocks the way we think about code. It offers scientifically sound techniques that can radically improve the way you master new technology, comprehend code, and memorize syntax. You'll learn how to benefit from productive struggle and turn confusion into a learning tool. Along the way, you'll discover how to create study resources as you become an expert at teaching yourself and bringing new colleagues up to speed. What's inside

Understand how your brain sees code

Speed reading skills to learn code quickly

Techniques to unravel complex code

Tips for making codebases understandable

About the reader For programmers who have experience working in more than one language.

About the author Dr. Felienne Hermans is an associate professor at Leiden University in the Netherlands. She has spent the last decade researching programming, how to learn and how to teach it.

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Summary

Deep Learning with Python introduces the field of deep learning using the Python language and the powerful Keras library. Written by Keras creator and Google AI researcher François Chollet, this book builds your understanding through intuitive explanations and practical examples. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology Machine learning has made remarkable progress in recent years. We went from near-unusable speech and image recognition, to near-human accuracy. We went from machines that couldn't beat a serious Go player, to defeating a world champion. Behind this progress is deep learning—a combination of engineering advances, best practices, and theory that enables a wealth of previously impossible smart applications.

About the Book *Deep Learning with Python* introduces the field of deep learning using the Python language and the powerful Keras library. Written by Keras creator and Google AI researcher François Chollet, this book builds your understanding through intuitive explanations and practical examples. You'll explore challenging concepts and practice with applications in computer vision, natural-language processing, and generative models. By the time you finish, you'll have the knowledge and hands-on skills to apply deep learning in your own projects.

What's Inside

Deep learning from first principles

Setting up your own deep-learning environment

Image-classification models

Deep learning for text and sequences

Neural style transfer, text generation, and image generation

About the Reader Readers need intermediate Python skills. No previous experience with Keras, TensorFlow, or machine learning is required.

About the Author François Chollet works on deep learning at Google in Mountain View, CA. He is the creator of the Keras deep-learning library, as well as a contributor to the TensorFlow machine-learning framework. He also does deep-learning research, with a focus on computer vision and the application of machine learning to formal reasoning. His papers have been published at major conferences in the field, including the Conference on Computer Vision and Pattern Recognition (CVPR), the Conference and Workshop on Neural Information Processing Systems (NIPS), the International Conference on Learning Representations (ICLR), and others.

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appendix B - Running Jupyter notebooks on an EC2 GPU instance

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.

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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

Summary

Deep Learning with R introduces the world of deep learning using the powerful Keras library and its R language interface. The book builds your understanding of deep learning through intuitive explanations and practical examples. Continue your journey into the world of deep learning with *Deep Learning with R in Motion*, a practical, hands-on video course available exclusively at Manning.com (www.manning.com/livevideo/deep-learning-with-r-in-motion). Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology Machine learning has made remarkable progress in recent years. Deep-learning systems now enable previously impossible smart applications, revolutionizing image recognition and natural-language processing, and identifying complex patterns in data. The Keras deep-learning library provides data scientists and developers working in R a state-of-the-art toolset for tackling deep-learning tasks.

About the Book *Deep Learning with R* introduces the world of deep learning using the powerful Keras library and its R language interface. Initially written for Python as *Deep Learning with Python* by Keras creator and Google AI researcher François Chollet and adapted for R by RStudio founder J. J. Allaire, this book builds your understanding of deep learning through intuitive explanations and practical examples. You'll practice your new skills with R-based applications in computer vision, natural-language processing, and generative models.

What's Inside

Deep learning from first principles

Setting up your own deep-learning environment

Image classification and generation

Deep learning for text and sequences

About the Reader You'll need intermediate R programming skills. No previous experience with machine learning or deep learning is assumed.

About the Authors François Chollet is a deep-learning researcher at Google and the author of the Keras library. J.J. Allaire is the founder of RStudio and the author of the R interfaces to TensorFlow and Keras.

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PART 1 - FUNDAMENTALS OF DEEP LEARNING

What is deep learning? Before we begin: the mathematical building blocks of neural networks

Getting started with neural networks

Fundamentals of machine learning

PART 2 - DEEP LEARNING IN PRACTICE

Deep learning for computer vision

Deep learning for text and sequences

Advanced deep-learning best practices

Generative deep learning

Conclusions

Summary

HTML5 in Action provides a complete introduction to web development using HTML5. You'll explore every aspect of the HTML5 specification through real-world examples and code samples. It's much more than just a specification reference, though. It lives up to the name *HTML5 in Action* by giving you the practical, hands-on guidance you'll need to use key features.

About the Technology HTML5 is not a few new tags and features added to an old standard—it's the foundation of the modern web,

enabling its interactive services, single-page UI, interactive games, and complex business applications. With support for standards-driven mobile app development, powerful features like local storage and WebSockets, superb audio and video APIs, and new layout options using CSS3, SVG, and Canvas, HTML5 has entered its prime time. About the Book HTML5 in Action provides a complete introduction to web development using HTML5. It explores the HTML5 specification through real-world examples and code samples. It earns the name "in Action" by giving you the practical, hands-on guidance you'll need to confidently build the sites and applications you—and your clients—have been wanting for years. This book concentrates on new HTML5 features and assumes you are familiar with standard HTML. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. What's Inside New semantic elements and form input types Single-page application design Creating interactive graphics Mobile web apps About the Authors Rob Crowther is a web developer and blogger and the author of Manning's Hello! HTML5 & CSS3. Joe Lennon is an enterprise mobile application developer. Ash Blue builds award-winning interactive projects. Greg Wanish is an independent web and eCommerce developer. Table of Contents PART 1 INTRODUCTION HTML5: from documents to applications PART 2 BROWSER-BASED APPS Form creation: input widgets, data binding, and data validation File editing and management: rich formatting, file storage, drag and drop Messaging: communicating to and from scripts in HTML5 Mobile applications: client storage and offline execution PART 3 INTERACTIVE GRAPHICS, MEDIA, AND GAMING 2D Canvas: low-level, 2D graphics rendering SVG: responsive in-browser graphics Video and audio: playing media in the browser WebGL: 3D application development Plus 10 Appendixes Summary Get Programming with Go introduces you to the powerful Go language without confusing jargon or high-level theory. By working through 32 quick-fire lessons, you'll quickly pick up the basics of the innovative Go programming language! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Go is a small programming language designed by Google to tackle big problems. Large projects mean large teams with people of varying levels of experience. Go offers a small, yet capable, language that can be understood and used by anyone, no matter their experience. About the Book Hobbyists, newcomers, and professionals alike can benefit from a fast, modern language; all you need is the right resource! Get Programming with Go provides a hands-on introduction to Go language fundamentals, serving as a solid foundation for your future programming projects. You'll master Go syntax, work with types and functions, and explore bigger ideas like state and concurrency, with plenty of exercises to lock in what you learn. What's inside Language concepts like slices, interfaces, pointers, and concurrency Seven capstone projects featuring spacefaring gophers, Mars rovers, ciphers, and simulations All examples run in the Go Playground - no installation required! About the Reader This book is for anyone familiar with computer programming, as well as anyone with the desire to learn. About the Author Nathan Youngman organizes the Edmonton Go meetup and is a mentor with Canada Learning Code. Roger Peppé contributes to Go and runs the Newcastle upon Tyne Go meetup. Table of Contents Unit 0 - GETTING STARTED Get ready, get set, Go Unit 1 - IMPERATIVE PROGRAMMING A glorified calculator Loops and branches Variable scope Capstone: Ticket to Mars Unit 2 - TYPES Real numbers Whole numbers Big numbers Multilingual text Converting between types Capstone: The Vigenère cipher Unit 3 - BUILDING BLOCKS Functions Methods First-class functions Capstone: Temperature tables Unit 4 - COLLECTIONS Arrayed in splendor Slices: Windows into arrays A bigger slice The ever-versatile map Capstone: A slice of life Unit 5 - STATE AND BEHAVIOR A little structure Go's got no class Composition and forwarding Interfaces Capstone: Martian animal sanctuary Unit 6 - DOWN THE GOPHER HOLE A few pointers Much ado about nil To err is human Capstone: Sudoku rules Unit 7 - CONCURRENT PROGRAMMING Goroutines and concurrency Concurrent state Capstone: Life on Mars Summary Get Programming with JavaScript is a hands-on introduction to programming for readers who have never programmed. You'll be writing your own web apps, games, and programs in no time! Foreword by Remy Sharp. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book Are you ready to start writing your own web apps, games, and programs? You're in the right place! Get Programming with JavaScript is a hands-on introduction to programming for readers who have never written a line of code. Since you're just getting started, this friendly book offers you lots of examples backed by careful explanations. As you go along, you'll find exercises to check your understanding and plenty of opportunities

to practice your new skills. You don't need anything special to follow the examples—just the text editor and web browser already installed on your computer. We even give you links to working online code so you can see how everything should look live on your screen. What's Inside All the basics—objects, functions, responding to users, and more Think like a coder and design your own programs Create a text-based adventure game Enhance web pages with JavaScript Run your programs in a web browser Four bonus chapters available online About the Reader No experience required! All you need is a web browser and an internet connection. About the Author John Larsen is a mathematics and computing teacher with an interest in educational research. He has an MA in mathematics and an MSc in information technology. He started programming in 1982, writing simple programs for teaching mathematics in 1993, building websites in 2001, and developing data-driven web-based applications for education in 2006. Table of Contents PART 1 CORE CONCEPTS ON THE CONSOLE Programming, JavaScript, and JS Bin Variables: storing data in your program Objects: grouping your data Functions: code on demand Arguments: passing data to functions Return values: getting data from functions Object arguments: functions working with objects Arrays: putting data into lists Constructors: building objects with functions Bracket notation: flexible property names PART 2 ORGANIZING YOUR PROGRAMS Scope: hiding information Conditions: choosing code to run Modules: breaking a program into pieces Models: working with data Views: displaying data Controllers: linking models and views PART 3 JAVASCRIPT IN THE BROWSER HTML: building web pages Controls: getting user input Templates: filling placeholders with data XHR: loading data Conclusion: get programming with JavaScript BONUS ONLINE CHAPTERS Node: running JavaScript outside the browser Express: building an API Polling: repeating requests with XHR Socket.IO: real-time messaging Summary Get Programming with JavaScript Next introduces the modern age of JavaScript programming with ES6 and ES7 without dragging you through confusing jargon and abstract examples you'll never use. In just 34 quick-fire sessions, you'll quickly be coding with the latest features and functions of ES6 and ES7! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Great code is readable, bug-free, and maintainable. Modern JavaScript, aka JavaScript Next, makes it much, much easier to write great applications. New features introduced in ES2015 simplify the structure of your JavaScript projects and radically streamline async-oriented tasks like writing reactive applications and microservices. About the Book Get Programming with JavaScript Next introduces you to the new features included in the ES2015-and-later JavaScript releases. You'll learn example by example in 34 short lessons, each designed to drive home a specific skill. The coverage is complete: you'll explore new language syntax, declarations, and data types. You'll structure code with modules, replace callbacks with promises, and use classes instead of constructors. Every time you turn a page, complete an exercise, or study a carefully crafted illustration, you'll be one step closer to JavaScript mastery. What's Inside New features from ES2015 and later Writing asynchronous code Creating custom iterables Troubleshooting modules and classes About the Reader Written for web developers comfortable with standard JavaScript 5 features and coding style. About the Author J.D. Isaacks is a seasoned developer, a JavaScript instructor, and an open source maintainer. Table of Contents Lesson 1 - ECMAScript specification and the proposal process Lesson 2 - Transpiling with Babel Lesson 3 - Bundling modules with Browserify UNIT 1 - VARIABLES AND STRINGS Lesson 4 - Declaring variables with let Lesson 5 - Declaring constants with const Lesson 6 - New string methods Lesson 7 - Template literals Lesson 8 - Capstone: Building a domain-specific language UNIT 2 - OBJECTS AND ARRAYS Lesson 9 - New array methods Lesson 10 - Object.assign Lesson 11 - Destructuring Lesson 12 - New object literal syntax Lesson 13 - Symbol-a new primitive Lesson 14 - Capstone: Simulating a lock and key UNIT 3 - FUNCTIONS Lesson 15 - Default parameters and rest Lesson 16 - Destructuring parameters Lesson 17 - Arrow functions Lesson 18 - Generator functions Lesson 19 - Capstone: The prisoner's dilemma UNIT 4 - MODULES Lesson 20 - Creating modules Lesson 21 - Using modules Lesson 22 - Capstone: Hangman game UNIT 5 - ITERABLES Lesson 23 - Iterables Lesson 24 - Sets Lesson 25 - Maps Lesson 26 - Capstone: Blackjack UNIT 6 - CLASSES Lesson 27 - Classes Lesson 28 - Extending classes Lesson 29 - Capstone: Comets UNIT 7 - WORKING ASYNCHRONOUSLY Lesson 30 - Promises Lesson 31 - Advanced promises Lesson 32 - Async functions Lesson 33 - Observables Lesson 34 - Capstone: Canvas image gallery Appendix - Exercise answers Summary In 2017, consumers downloaded 178 billion apps, and analysts predict growth to 258 billion by

2022. Mobile customers are demanding more—and better—apps, and it's up to developers like you to write them! Flutter, a revolutionary new cross-platform software development kit created by Google, makes it easier than ever to write secure, high-performance native apps for iOS and Android. Flutter apps are blazingly fast because this open source solution compiles your Dart code to platform-specific programs with no JavaScript bridge! Flutter also supports hot reloading to update changes instantly. And thanks to its built-in widgets and rich motion APIs, Flutter's apps are not just highly responsive, they're stunning! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology With Flutter, you can build mobile applications using a single, feature-rich SDK that includes everything from a rendering engine to a testing environment. Flutter compiles programs written in Google's intuitive Dart language to platform-specific code so your iOS and Android games, utilities, and shopping platforms all run like native Java or Swift apps. About the book Flutter in Action teaches you to build professional-quality mobile applications using the Flutter SDK and the Dart programming language. You'll begin with a quick tour of Dart essentials and then dive into engaging, well-described techniques for building beautiful user interfaces using Flutter's huge collection of built-in widgets. The combination of diagrams, code examples, and annotations makes learning a snap. As you go, you'll appreciate how the author makes easy reading of complex topics like routing, state management, and async programming. What's inside Understanding the Flutter approach to the UI All the Dart you need to get started Creating custom animations Testing and debugging About the reader You'll need basic web or mobile app development skills. About the author Eric Windmill is a professional Dart developer and a contributor to open-source Flutter projects. His work is featured on the Flutter Showcase page. Table of Contents: PART 1 - MEET FLUTTER 1 | Meet Flutter 2 | A brief intro to Dart 3 | Breaking into Flutter PART 2 - FLUTTER USER INTERACTION, STYLES, AND ANIMATIONS 4 | Flutter UI: Important widgets, themes, and layout 5 | User interaction: Forms and gestures 6 | Pushing pixels: Flutter animations and using the canvas PART 3 - STATE MANAGEMENT AND ASYNCHRONOUS DART 7 | Flutter routing in depth 8 | Flutter state management 9 | Async Dart and Flutter and infinite scrolling PART 4 - BEYOND FOUNDATIONS 10 | Working with data: HTTP, Firestore, and JSON 11 | Testing Flutter apps Summary Practical Probabilistic Programming introduces the working programmer to probabilistic programming. In it, you'll learn how to use the PP paradigm to model application domains and then express those

probabilistic models in code. Although PP can seem abstract, in this book you'll immediately work on practical examples, like using the Figaro language to build a spam filter and applying Bayesian and Markov networks, to diagnose computer system data problems and recover digital images. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The data you accumulate about your customers, products, and website users can help you not only to interpret your past, it can also help you predict your future! Probabilistic programming uses code to draw probabilistic inferences from data. By applying specialized algorithms, your programs assign degrees of probability to conclusions. This means you can forecast future events like sales trends, computer system failures, experimental outcomes, and many other critical concerns. About the Book Practical Probabilistic Programming introduces the working programmer to probabilistic programming. In this book, you'll immediately work on practical examples like building a spam filter, diagnosing computer system data problems, and recovering digital images. You'll discover probabilistic inference, where algorithms help make extended predictions about issues like social media usage. Along the way, you'll learn to use functional-style programming for text analysis, object-oriented models to predict social phenomena like the spread of tweets, and open universe models to gauge real-life social media usage. The book also has chapters on how probabilistic models can help in decision making and modeling of dynamic systems. What's Inside Introduction to probabilistic modeling Writing probabilistic programs in Figaro Building Bayesian networks Predicting product lifecycles Decision-making algorithms About the Reader This book assumes no prior exposure to probabilistic programming. Knowledge of Scala is helpful. About the Author Avi Pfeffer is the principal developer of the Figaro language for probabilistic programming. Table of Contents PART 1 INTRODUCING PROBABILISTIC PROGRAMMING AND FIGARO Probabilistic programming in a nutshell A quick Figaro tutorial Creating a probabilistic programming application PART 2 WRITING PROBABILISTIC PROGRAMS Probabilistic models and probabilistic programs Modeling dependencies with Bayesian and Markov networks Using Scala and Figaro collections to build up models Object-oriented probabilistic modeling Modeling dynamic systems PART 3 INFERENCE The three rules of probabilistic inference Factored inference algorithms Sampling algorithms Solving other inference tasks Dynamic reasoning and parameter learning

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