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Looking for a reliable way to learn how to program on your own, without being overwhelmed by confusing concepts? Head First Programming introduces the core concepts of writing computer programs -- variables, decisions, loops, functions, and objects -- which apply regardless of the programming language. This book offers concrete examples and exercises in the dynamic and versatile Python language to demonstrate and reinforce these concepts. Learn the basic tools to start writing the programs that interest you, and get a better understanding of what software can (and cannot) do. When you're finished, you'll have the necessary foundation to learn any programming language or tackle any software project you choose. With a focus on programming concepts, this book teaches you how to: Understand the core features of all programming languages, including: variables, statements, decisions, loops, expressions, and operators Reuse code with functions Use library code to save time and effort Select the best data structure to manage complex data Write programs that talk to the Web Share your data with other programs Write programs that test themselves and help you avoid embarrassing coding errors We think your time is too valuable to waste struggling with new concepts. Using the latest research in cognitive science and learning theory to craft a multi-sensory learning experience, Head First Programming uses a visually rich format designed for the way your brain works, not a text-heavy approach that puts you to sleep.

Learn how to build interactive, data-driven websites—even if you don’t have any previous programming experience. If you know how to build static sites with HTML, this popular guide will help you tackle dynamic web programming. You’ll get a thorough grounding in today’s

core open source technologies: PHP, MySQL, JavaScript, and CSS. Explore each technology separately, learn how to combine them, and pick up valuable web programming concepts along the way, including objects, XHTML, cookies, and session management. This book provides review questions in each chapter to help you apply what you've learned. Learn PHP essentials and the basics of object-oriented programming Master MySQL, from database structure to complex queries Create web pages with PHP and MySQL by integrating forms and other HTML features Learn JavaScript fundamentals, from functions and event handling to accessing the Document Object Model Pick up CSS basics for formatting and styling your web pages Turn your website into a highly dynamic environment with Ajax calls Upload and manipulate files and images, validate user input, and secure your applications Explore a working example that brings all of the ingredients together

Join the technological revolution that's taking the financial world by storm. Mastering Bitcoin is your guide through the seemingly complex world of bitcoin, providing the knowledge you need to participate in the internet of money. Whether you're building the next killer app, investing in a startup, or simply curious about the technology, this revised and expanded second edition provides essential detail to get you started. Bitcoin, the first successful decentralized digital currency, is still in its early stages and yet it's already spawned a multi-billion-dollar global economy open to anyone with the knowledge and passion to participate. Mastering Bitcoin provides the knowledge. You simply supply the passion. The second edition includes: A broad introduction of bitcoin and its underlying blockchain—ideal for non-technical users, investors, and business executives An explanation of the technical foundations of bitcoin and cryptographic currencies for developers, engineers, and software and systems architects

Details of the bitcoin decentralized network, peer-to-peer architecture, transaction lifecycle, and security principles New developments such as Segregated Witness, Payment Channels, and Lightning Network A deep dive into blockchain applications, including how to combine the building blocks offered by this platform into higher-level applications User stories, analogies, examples, and code snippets illustrating key technical concepts

Looking to study up for the new J2EE 1.5 Sun Certified Web Component Developer (SCWCD) exam? This book will get you way up to speed on the technology you'll know it so well, in fact, that you can pass the brand new J2EE 1.5 exam. If that's what you want to do, that is. Maybe you don't care about the exam, but need to use servlets and JSPs in your next project. You're working on a deadline. You're over the legal limit for caffeine. You can't waste your time with a book that makes sense only AFTER you're an expert (or worse, one that puts you to sleep). Learn how to write servlets and JSPs, what makes a web container tick (and what ticks it off), how to use JSP's Expression Language (EL for short), and how to write deployment descriptors for your web applications. Master the c:out tag, and get a handle on exactly what's changed since the older J2EE 1.4 exam. You don't just pass the new J2EE 1.5 SCWCD exam, you'll understand this stuff and put it to work immediately. Head First Servlets and JSP doesn't just give you a bunch of facts to memorize; it drives knowledge straight into your brain. You'll interact with servlets and JSPs in ways that help you learn quickly and deeply. And when you're through with the book, you can take a brand-new mock exam, created specifically to simulate the real test-taking experience.

Annotation Over the past 10 years, distributed systems have become more fine-grained. From the large multi-million line long monolithic applications, we are now seeing the benefits of

smaller self-contained services. Rather than heavy-weight, hard to change Service Oriented Architectures, we are now seeing systems consisting of collaborating microservices. Easier to change, deploy, and if required retire, organizations which are in the right position to take advantage of them are yielding significant benefits. This book takes an holistic view of the things you need to be cognizant of in order to pull this off. It covers just enough understanding of technology, architecture, operations and organization to show you how to move towards finer-grained systems.

O’Reilly Media is unique among tech book publishers for its iconic animal covers. Everything from tarsiers, bears, camels, and big cats to a variety of birds, fish, anemones, and insects have graced O’Reilly book covers since the late 1980s. Now, with this high-quality coloring book, you can put your own spin on this group of classic prints. The coloring book includes 12 images from the O’Reilly Animal image archive, converted for coloring by O'Reilly designer Karen Montgomery. These beautiful reproductions of 19th century engravings are printed on heavyweight paper with nothing on the back to compromise your own colorful masterpieces. This isn’t your kid’s coloring book. Take it out when you need a break and give the left side of your brain a chance to express itself for a change. Relax, have some fun, and create your own animal menagerie—in color.

Author Scott Murray teaches you the fundamental concepts and methods of D3, a JavaScript library that lets you express data visually in a web browser.

The O'Reilly AnimalsAn Adult Coloring BookO'Reilly Media

Updated for the latest database management systems -- including MySQL 6.0, Oracle 11g, and Microsoft's SQL Server 2008 -- this introductory guide will get you up and running with

SQL quickly. Whether you need to write database applications, perform administrative tasks, or generate reports, Learning SQL, Second Edition, will help you easily master all the SQL fundamentals. Each chapter presents a self-contained lesson on a key SQL concept or technique, with numerous illustrations and annotated examples. Exercises at the end of each chapter let you practice the skills you learn. With this book, you will: Move quickly through SQL basics and learn several advanced features Use SQL data statements to generate, manipulate, and retrieve data Create database objects, such as tables, indexes, and constraints, using SQL schema statements Learn how data sets interact with queries, and understand the importance of subqueries Convert and manipulate data with SQL's built-in functions, and use conditional logic in data statements Knowledge of SQL is a must for interacting with data. With Learning SQL, you'll quickly learn how to put the power and flexibility of this language to work.

Is your organization rapidly accumulating more information than you know how to manage? This updated edition of Enterprise Search helps you create an enterprise search solution based on more than just technology. Author Martin White shows you how to plan and implement a managed search environment that meets the needs of your business and your employees. You'll learn why it’s absolutely vital to have a dedicated staff manage your search technology and support your users. New material for this second edition includes material on SharePoint 2013 search, managing open source search development, website search, designing the search user, and assessing search performance. Chapters now include a Further Reading section for computer

science and information science students. Topics include: 10 critical success factors to assess organizational search maturity Essential skills needed to support a successful search application How to specify and manage open source search development How to manage SharePoint 2013 search Methods to assess the business impact of search Best practices in user interface design The importance of search for websites What to include in a search strategy

Deep learning networks are getting smaller. Much smaller. The Google Assistant team can detect words with a model just 14 kilobytes in size—small enough to run on a microcontroller. With this practical book you'll enter the field of TinyML, where deep learning and embedded systems combine to make astounding things possible with tiny devices. Pete Warden and Daniel Situnayake explain how you can train models small enough to fit into any environment. Ideal for software and hardware developers who want to build embedded systems using machine learning, this guide walks you through creating a series of TinyML projects, step-by-step. No machine learning or microcontroller experience is necessary. Build a speech recognizer, a camera that detects people, and a magic wand that responds to gestures Work with Arduino and ultra-low-power microcontrollers Learn the essentials of ML and how to train your own models Train models to understand audio, image, and accelerometer data Explore TensorFlow Lite for Microcontrollers, Google's toolkit for TinyML Debug applications and provide safeguards for privacy and security Optimize latency, energy usage, and

model and binary size

This book will demystify Angular as a framework, as well as provide clear instructions and examples on how to get started with writing scalable Angular applications. Angular: Up & Running covers most of the major pieces of Angular, but in a structured manner that is generally used in hands-on training. Each chapter takes one concept, and use examples to cover how it works. Problems to work on (with solutions) at the end of each chapter reinforce the learnings of each chapter and allow readers to really get hands-on with Angular.

An engaging read, this text imparts best practices for using the Perforce Software Configuration Management system--written by a Perforce insider.

WTF? can be an expression of amazement or an expression of dismay. In today's economy, we have far too much dismay along with our amazement, and technology bears some of the blame. In this combination of memoir, business strategy guide, and call to action, Tim O'Reilly, Silicon Valley's leading intellectual and the founder of O'Reilly Media, explores the upside and the potential downsides of today's WTF? technologies. What is the future when an increasing number of jobs can be performed by intelligent machines instead of people, or done only by people in partnership with those machines? What happens to our consumer based societies—to workers and to the companies that depend on their purchasing power? Is income inequality and unemployment an inevitable consequence of technological advancement, or are there

paths to a better future? What will happen to business when technology-enabled networks and marketplaces are better at deploying talent than traditional companies? How should companies organize themselves to take advantage of these new tools? What's the future of education when on-demand learning outperforms traditional institutions? How can individuals continue to adapt and retrain? Will the fundamental social safety nets of the developed world survive the transition, and if not, what will replace them? O'Reilly is "the man who can really can make a whole industry happen," according to Eric Schmidt, Executive Chairman of Alphabet (Google.) His genius over the past four decades has been to identify and to help shape our response to emerging technologies with world shaking potential—the World Wide Web, Open Source Software, Web 2.0, Open Government data, the Maker Movement, Big Data, and now AI. O'Reilly shares the techniques he's used at O'Reilly Media to make sense of and predict past innovation waves and applies those same techniques to provide a framework for thinking about how today's world-spanning platforms and networks, on-demand services, and artificial intelligence are changing the nature of business, education, government, financial markets, and the economy as a whole. He provides tools for understanding how all the parts of modern digital businesses work together to create marketplace advantage and customer value, and why ultimately, they cannot succeed unless their ecosystem succeeds along with them. The core of the book's call to action is an exhortation to businesses to DO MORE with technology rather than just

using it to cut costs and enrich their shareholders. Robots are going to take our jobs, they say. O'Reilly replies, “Only if that’s what we ask them to do! Technology is the solution to human problems, and we won’t run out of work till we run out of problems." Entrepreneurs need to set their sights on how they can use big data, sensors, and AI to create amazing human experiences and the economy of the future, making us all richer in the same way the tools of the first industrial revolution did. Yes, technology can eliminate labor and make things cheaper, but at its best, we use it to do things that were previously unimaginable! What is our poverty of imagination? What are the entrepreneurial leaps that will allow us to use the technology of today to build a better future, not just a more efficient one? Whether technology brings the WTF? of wonder or the WTF? of dismay isn't inevitable. It's up to us!

Learn how to use, deploy, and maintain Apache Spark with this comprehensive guide, written by the creators of the open-source cluster-computing framework. With an emphasis on improvements and new features in Spark 2.0, authors Bill Chambers and Matei Zaharia break down Spark topics into distinct sections, each with unique goals. You’ll explore the basic operations and common functions of Spark’s structured APIs, as well as Structured Streaming, a new high-level API for building end-to-end streaming applications. Developers and system administrators will learn the fundamentals of monitoring, tuning, and debugging Spark, and explore machine learning techniques and scenarios for employing MLlib, Spark’s scalable machine-learning library. Get a gentle

overview of big data and Spark Learn about DataFrames, SQL, and Datasets—Spark's core APIs—through worked examples Dive into Spark's low-level APIs, RDDs, and execution of SQL and DataFrames Understand how Spark runs on a cluster Debug, monitor, and tune Spark clusters and applications Learn the power of Structured Streaming, Spark's stream-processing engine Learn how you can apply MLlib to a variety of problems, including classification or recommendation

What will you learn from this book? Go makes it easy to build software that's simple, reliable, and efficient. Andthis book makes it easy for programmers like you to get started. Googledesigned Go for high-performance networking and multiprocessing, but—like Python and JavaScript—the language is easy to read and use. With thispractical hands-on guide, you'll learn how to write Go code using clearexamples that demonstrate the language in action. Best of all, you'll understandthe conventions and techniques that employers want entry-level Godevelopers to know. Why does this book look so different? Based on the latest research in cognitive science and learning theory, HeadFirst Go uses a visually rich format to engage your mind rather than a textheavyapproach that puts you to sleep. Why waste your time struggling withnew concepts? This multisensory learning experience is designed for theway your brain really works.

How can you establish a customer-centric culture in an organization? This is the first comprehensive book on how to actually do service design to improve the quality and

the interaction between service providers and customers. You'll learn specific facilitation guidelines on how to run workshops, perform all of the main service design methods, implement concepts in reality, and embed service design successfully in an organization. Great customer experience needs a common language across disciplines to break down silos within an organization. This book provides a consistent model for accomplishing this and offers hands-on descriptions of every single step, tool, and method used. You'll be able to focus on your customers and iteratively improve their experience. Move from theory to practice and build sustainable business success. Data science libraries, frameworks, modules, and toolkits are great for doing data science, but they're also a good way to dive into the discipline without actually understanding data science. In this book, you'll learn how many of the most fundamental data science tools and algorithms work by implementing them from scratch. If you have an aptitude for mathematics and some programming skills, author Joel Grus will help you get comfortable with the math and statistics at the core of data science, and with hacking skills you need to get started as a data scientist. Today's messy glut of data holds answers to questions no one's even thought to ask. This book provides you with the know-how to dig those answers out. Get a crash course in Python Learn the basics of linear algebra, statistics, and probability—and understand how and when they're used in data science Collect, explore, clean, munge, and manipulate data Dive into the fundamentals of machine learning Implement models such as k-nearest

Neighbors, Naive Bayes, linear and logistic regression, decision trees, neural networks, and clustering Explore recommender systems, natural language processing, network analysis, MapReduce, and databases

Even if you're familiar with C# syntax, knowing how to combine various language features is a critical skill when you're building applications. This cookbook is packed full of recipes to help you solve issues for C# programming tasks you're likely to encounter. You'll learn tried-and-true techniques to help you achieve greater productivity and improve the quality of your code. Author and independent consultant Joe Mayo shares some of the most important practices you'll need to be successful as a C# developer. Each section of this cookbook describes some useful facet of the C# programming language. These recipes--the result of many years of experience--are proven concepts for solving real-world problems with C#. Recipes in this book will help you: Set up your project, manage object lifetime, and establish patterns Improve code quality through maintainability, error prevention, and correct syntax Use LINQ to Objects for in-memory data manipulation and querying Understand the differences between dynamic programming and reflection Apply several async programming features you may not be aware of Work with data using newer libraries and algorithms Learn different ways to use new C# features, such as pattern

matching and records

A tutorial introducing Java basics covers programming principles, integrating applets with Web applications, and using threads, arrays, and sockets.

Shows how to write, debug, and run a Perl program, describes CGI scripting and data manipulation, and describes scalar values, basic operators, and associative arrays.

From the bestselling author of Killing Lincoln and host of Fox News' top show The O'Reilly Factor, the best of Bill O'Reilly's provocative writing—reflecting his ideas, wisdom, and core values Bill O'Reilly is one of the most recognized and talked-about journalists of our time. With an unparalleled track record as an author and with the #1-rated Fox News show, The O'Reilly Factor, O'Reilly has become a veritable institution of political insight and keen advice. In Keep It Pithy, O'Reilly offers a classic collection of the most memorable writings from his bestselling books, and looks back at how his opinions and ideas have been proven right or wrong by the passage of time. With his trademark candor and no-nonsense approach, each chapter focuses on a core theme as it gathers O'Reilly's thoughts on the most compelling issues of our time and provides readers an illuminating guide to the American cultural landscape. A spirited and personal book, Keep It Pithy is the perfect addition to an O'Reilly fan's library, or the best

introduction for the few left uninitiated.

Design has become the key link between users and today's complex and rapidly evolving digital experiences, and designers are starting to be included in strategic conversations about the products and services that enterprises ultimately deliver. This has led to companies building in-house digital/experience design teams at unprecedented rates, but many of them don't understand how to get the most out of their investment. This practical guide provides guidelines for creating and leading design teams within your organization, and explores ways to use design as part of broader strategic planning. You'll discover: Why design's role has evolved in the digital age How to infuse design into every product and service experience The 12 qualities of effective design organizations How to structure your design team through a Centralized Partnership Design team roles and evolution The process of recruiting and hiring designers How to manage your design team and promote professional growth

Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you

make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

A clear and concise introduction and reference for anyone new to the subject of statistics.

Offers six sample business models and thirty case studies to help build and monetize a business.

Effective visualization is the best way to communicate information from the increasingly large and complex datasets in the natural and social sciences. But with the increasing power of visualization software today, scientists, engineers,

and business analysts often have to navigate a bewildering array of visualization choices and options. This practical book takes you through many commonly encountered visualization problems, and it provides guidelines on how to turn large datasets into clear and compelling figures. What visualization type is best for the story you want to tell? How do you make informative figures that are visually pleasing? Author Claus O. Wilke teaches you the elements most critical to successful data visualization. Explore the basic concepts of color as a tool to highlight, distinguish, or represent a value Understand the importance of redundant coding to ensure you provide key information in multiple ways Use the book's visualizations directory, a graphical guide to commonly used types of data visualizations Get extensive examples of good and bad figures Learn how to use figures in a document or report and how employ them effectively to tell a compelling story

Get the definitive guide on Gatsby, the JavaScript framework for building blazing fast websites and applications. Used by Nike, Costa Coffee, and other companies worldwide, Gatsby is emerging as one of the key technologies in the Jamstack (JavaScript, APIs, and markup) ecosystem. With this comprehensive guide, you'll learn how to architect, build, and deploy Gatsby sites independently or with CMSs, commerce systems, and other data sources. Author Preston So begins by showing you

how to set up a Gatsby site from scratch. From there, youâ??ll learn ways to use Gatsbyâ??s declarative rendering and GraphQL API, build complex offline-enabled sites, and continuously deploy Gatsby sites on a variety of platforms, including Gatsby Cloud. Discover how Gatsby integrates with many data sources and plug-ins Set up, configure, and architect Gatsby sites using Gatsby's CLI, React, JSX, and GraphQL with high performance out of the box Build an independent Gatsby site based on Markdown and data- and content-driven Gatsby sites that integrate with CMSs and commerce platforms Deploy Gatsby sites with full CI/CD and test coverage on a variety of platforms, including Netlify, Vercel, and Gatsby Cloud

Over the last few years, Linux has grown both as an operating system and a tool for personal and business use. Simultaneously becoming more user friendly and more powerful as a back-end system, Linux has achieved new plateaus: the newer filesystems have solidified, new commands and tools have appeared and become standard, and the desktop--including new desktop environments--have proved to be viable, stable, and readily accessible to even those who don't consider themselves computer gurus. Whether you're using Linux for personal software projects, for a small office or home office (often termed the SOHO environment), to provide services to a small group of colleagues, or to administer a site responsible for millions of email and web connections each day, you need quick access to information on a wide range of tools. This book covers all aspects of administering and making effective use of Linux

systems. Among its topics are booting, package management, and revision control. But foremost in Linux in a Nutshell are the utilities and commands that make Linux one of the most powerful and flexible systems available. Now in its fifth edition, Linux in a Nutshell brings users up-to-date with the current state of Linux. Considered by many to be the most complete and authoritative command reference for Linux available, the book covers all substantial user, programming, administration, and networking commands for the most common Linux distributions. Comprehensive but concise, the fifth edition has been updated to cover new features of major Linux distributions. Configuration information for the rapidly growing commercial network services and community update services is one of the subjects covered for the first time. But that's just the beginning. The book covers editors, shells, and LILO and GRUB boot options. There's also coverage of Apache, Samba, Postfix, sendmail, CVS, Subversion, Emacs, vi, sed, gawk, and much more. Everything that system administrators, developers, and power users need to know about Linux is referenced here, and they will turn to this book again and again.

This updated reference offers a clear description of make, a central engine in many programming projects that simplifies the process of re-linking a program after re-compiling source files. Original. (Intermediate)

If you need help writing programs in Python 3, or want to update older Python 2 code, this book is just the ticket. Packed with practical recipes written and tested with Python

3.3, this unique cookbook is for experienced Python programmers who want to focus on modern tools and idioms. Inside, you'll find complete recipes for more than a dozen topics, covering the core Python language as well as tasks common to a wide variety of application domains. Each recipe contains code samples you can use in your projects right away, along with a discussion about how and why the solution works. Topics include: Data Structures and Algorithms Strings and Text Numbers, Dates, and Times Iterators and Generators Files and I/O Data Encoding and Processing Functions Classes and Objects Metaprogramming Modules and Packages Network and Web Programming Concurrency Utility Scripting and System Administration Testing, Debugging, and Exceptions C Extensions

Customers who have inconsistent, broken experiences with products and services are understandably frustrated. But it's worse when people inside these companies can't pinpoint the problem because they're too focused on business processes. This practical book shows your company how to use alignment diagrams to turn valuable customer observations into actionable insight. With this unique tool, you can visually map your existing customer experience and envision future solutions. Product and brand managers, marketing specialists, and business owners will learn how experience diagramming can help determine where business goals and customer perspectives intersect. Once you're armed with this data, you can provide users with real value. Mapping Experiences is divided into three parts: Understand the underlying principles

of diagramming, and discover how these diagrams can inform strategy Learn how to create diagrams with the four iterative modes in the mapping process: setting up a mapping initiative, investigating the evidence, visualizing the process, and using diagrams in workshops and experiments See key diagrams in action, including service blueprints, customer journey maps, experience maps, mental models, and spatial maps and ecosystem models

Customers who have inconsistent experiences with products and services are understandably frustrated. But it's worse for organizations that can't pinpoint the causes of these problems because they're too focused on processes. This updated book shows your team how to use alignment diagrams to turn valuable customer observations into actionable insight. With this powerful technique, you can visually map existing customer experience and envision future solutions. Designers, product and brand managers, marketing specialists, and business owners will discover how experience diagramming helps you determine where business goals and customer perspectives intersect. Armed with this insight, you can provide the people you serve with real value. Mapping experiences isn't just about product and service design; it's about understanding the human condition. Emphasize recent changes in business using the latest mapping techniques Create diagrams that account for multichannel experiences as well as ecosystem design Understand how facilitation is increasingly becoming part of mapping efforts, shifting the focus from a deliverable to actionability

Explore ways to apply mapping of all kinds to noncommercial settings, such as helping victims of domestic violence

This instructive book takes you step by step through ways to track, merge, and manage both open source and commercial software projects with Mercurial, using Windows, Mac OS X, Linux, Solaris, and other systems. Mercurial is the easiest system to learn when it comes to distributed revision control. And it's a very flexible tool that's ideal whether you're a lone programmer working on a small project, or part of a huge team dealing with thousands of files. Mercurial permits a countless variety of development and collaboration methods, and this book offers several concrete suggestions to get you started. This guide will help you: Learn the basics of working with a repository, changesets, and revisions Merge changes from separate repositories Set up Mercurial to work with files on a daily basis, including which ones to track Get examples and tools for setting up various workflow models Manage a project that's making progress on multiple fronts at once Find and fix mistakes by isolating problem sources Use hooks to perform actions automatically in response to repository events Customize the output of Mercurial Mercurial: The Definitive Guide maintains a strong focus on simplicity to help you learn Mercurial quickly and thoroughly.

Learn On-Demand TV, DVRs, Music, Games, Books, and More! With My Digital Entertainment for Seniors, you'll discover easy ways to access and experience entertainment using today's technology, without getting confused or bogged down with

techno-babble—and without spending a fortune. This easy-to-follow guide covers all aspects of entertainment—movies, TV shows, radio, music, newspapers and magazines, books, and more—whether you're using a computer, mobile device, or other technology. Specifically, you'll: Get acquainted with all forms of digital entertainment that are available in everyday life, including on-demand TV shows, movies, music and radio programming, podcasts, eBooks and audiobooks, digital editions of newspapers and magazines, YouTube videos, and interactive games.Discover the difference between streaming and downloading content from the Internet to your computer or mobile device. Learn what equipment you'll need and how to use this equipment, no matter how tech-savvy you are—or aren't. Find out how to watch, listen to, and read what you want, when you want it, on your TV, desktop computer, notebook computer, smartphone, tablet, eBook reader, or gaming console. Learn what types of entertainment are available to use on eBook readers, digital video recorders, digital music players, high-definition television sets, cable/satellite TV service providers, what types of entertainment are readily available via the Internet, and how to use your computer, smartphone or tablet as an entertainment device. Find ways to stay safe and protect yourself from identity theft or online crime when surfing the Internet, shopping online, playing games, doing online banking, and handling other Internet-related tasks. Today, software engineers need to know not only how to program effectively but also how to develop proper engineering practices to make their codebase sustainable and

healthy. This book emphasizes this difference between programming and software engineering. How can software engineers manage a living codebase that evolves and responds to changing requirements and demands over the length of its life? Based on their experience at Google, software engineers Titus Winters and Hyrum Wright, along with technical writer Tom Manshreck, present a candid and insightful look at how some of the world's leading practitioners construct and maintain software. This book covers Google's unique engineering culture, processes, and tools and how these aspects contribute to the effectiveness of an engineering organization. You'll explore three fundamental principles that software organizations should keep in mind when designing, architecting, writing, and maintaining code: How time affects the sustainability of software and how to make your code resilient over time How scale affects the viability of software practices within an engineering organization What trade-offs a typical engineer needs to make when evaluating design and development decisions

When it comes to choosing, using, and maintaining a database, understanding its internals is essential. But with so many distributed databases and tools available today, it's often difficult to understand what each one offers and how they differ. With this practical guide, Alex Petrov guides developers through the concepts behind modern database and storage engine internals. Throughout the book, you'll explore relevant material gleaned from numerous books, papers, blog posts, and the source code of

several open source databases. These resources are listed at the end of parts one and two. You'll discover that the most significant distinctions among many modern databases reside in subsystems that determine how storage is organized and how data is distributed. This book examines: Storage engines: Explore storage classification and taxonomy, and dive into B-Tree-based and immutable Log Structured storage engines, with differences and use-cases for each Storage building blocks: Learn how database files are organized to build efficient storage, using auxiliary data structures such as Page Cache, Buffer Pool and Write-Ahead Log Distributed systems: Learn step-by-step how nodes and processes connect and build complex communication patterns Database clusters: Which consistency models are commonly used by modern databases and how distributed storage systems achieve consistency

Through a series of recent breakthroughs, deep learning has boosted the entire field of machine learning. Now, even programmers who know close to nothing about this technology can use simple, efficient tools to implement programs capable of learning from data. This practical book shows you how. By using concrete examples, minimal theory, and two production-ready Python frameworks—Scikit-Learn and TensorFlow—author Aurélien Géron helps you gain an intuitive understanding of the concepts and tools for building intelligent systems. You'll learn a range of techniques, starting with simple linear regression and progressing to deep neural networks. With exercises in each chapter to help you apply what you've learned, all you need is

programming experience to get started. Explore the machine learning landscape, particularly neural nets Use Scikit-Learn to track an example machine-learning project end-to-end Explore several training models, including support vector machines, decision trees, random forests, and ensemble methods Use the TensorFlow library to build and train neural nets Dive into neural net architectures, including convolutional nets, recurrent nets, and deep reinforcement learning Learn techniques for training and scaling deep neural nets

Jump into the world of Near Field Communications (NFC), the fast-growing technology that lets devices in close proximity exchange data, using radio signals. With lots of examples, sample code, exercises, and step-by-step projects, this hands-on guide shows you how to build NFC applications for Android, the Arduino microcontroller, and embedded Linux devices. You'll learn how to write apps using the NFC Data Exchange Format (NDEF) in PhoneGap, Arduino, and node.js that help devices read messages from passive NFC tags and exchange data with other NFC-enabled devices. If you know HTML and JavaScript, you're ready to start with NFC. Dig into NFC's architecture, and learn how it's related to RFID Write sample apps for Android with PhoneGap and its NFC plugin Dive into NDEF: examine existing tag-writer apps and build your own Listen for and filter NDEF messages, using PhoneGap event listeners Build a full Android app to control lights and music in your home Create a hotel registration app with Arduino, from check-in to door lock Write peer-to-peer NFC

messages between two Android devices Explore embedded Linux applications, using examples on Raspberry Pi and BeagleBone

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

Learn key topics such as language basics, pointers and pointer arithmetic, dynamic memory management, multithreading, and network programming. Learn how to use the compiler, the make tool, and the archiver.