

# 12 Essential Skills For Software Architects Dave Hendricksen

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*AI for Game Developers* - David M Bourg 2004-07-23  
Written for the novice AI programmer, this text introduces the reader to techniques such as finite state machines, fuzzy logic, neural networks and many others in an easy-to-understand language, supported with code

samples throughout the text.  
[Continuous Delivery](#) - Jez Humble 2010-07-27  
Winner of the 2011 Jolt Excellence Award! Getting software released to users is often a painful, risky, and time-consuming process. This groundbreaking new book sets out the principles and technical

practices that enable rapid, incremental delivery of high quality, valuable new functionality to users. Through automation of the build, deployment, and testing process, and improved collaboration between developers, testers, and operations, delivery teams can get changes released in a matter of hours— sometimes even minutes—no matter what the size of a project or the complexity of its code base. Jez Humble and David Farley begin by presenting the foundations of a rapid, reliable, low-risk delivery process. Next, they introduce the “deployment pipeline,” an automated process for managing all changes, from check-in to release. Finally, they discuss the “ecosystem” needed to support continuous delivery, from infrastructure, data and configuration management to governance. The authors introduce state-of-the-art techniques, including automated infrastructure management and data migration, and the use of

virtualization. For each, they review key issues, identify best practices, and demonstrate how to mitigate risks. Coverage includes

- Automating all facets of building, integrating, testing, and deploying software
- Implementing deployment pipelines at team and organizational levels
- Improving collaboration between developers, testers, and operations
- Developing features incrementally on large and distributed teams
- Implementing an effective configuration management strategy
- Automating acceptance testing, from analysis to implementation
- Testing capacity and other non-functional requirements
- Implementing continuous deployment and zero-downtime releases
- Managing infrastructure, data, components and dependencies
- Navigating risk management, compliance, and auditing

Whether you’re a developer, systems administrator, tester, or manager, this book will help your organization move from idea to release faster than

ever—so you can deliver value to your business rapidly and reliably.

Righting Software - Juval Löwy  
2019-11-29

Right Your Software and Transform Your Career  
Righting Software presents the proven, structured, and highly engineered approach to software design that renowned architect Juval Löwy has practiced and taught around the world. Although companies of every kind have successfully implemented his original design ideas across hundreds of systems, these insights have never before appeared in print. Based on first principles in software engineering and a comprehensive set of matching tools and techniques, Löwy's methodology integrates system design and project design. First, he describes the primary area where many software architects fail and shows how to decompose a system into smaller building blocks or services, based on volatility. Next, he shows how to flow an effective project design from the system design; how to

accurately calculate the project duration, cost, and risk; and how to devise multiple execution options. The method and principles in Righting Software apply regardless of your project and company size, technology, platform, or industry. Löwy starts the reader on a journey that addresses the critical challenges of software development today by righting software systems and projects as well as careers—and possibly the software industry as a whole. Software professionals, architects, project leads, or managers at any stage of their career will benefit greatly from this book, which provides guidance and knowledge that would otherwise take decades and many projects to acquire. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

**Masters of Doom** - David Kushner  
2004-05-11  
Masters of Doom is the

amazing true story of the Lennon and McCartney of video games: John Carmack and John Romero. Together, they ruled big business. They transformed popular culture. And they provoked a national controversy. More than anything, they lived a unique and rollicking American Dream, escaping the broken homes of their youth to co-create the most notoriously successful game franchises in history—Doom and Quake—until the games they made tore them apart. Americans spend more money on video games than on movie tickets. *Masters of Doom* is the first book to chronicle this industry's greatest story, written by one of the medium's leading observers. David Kushner takes readers inside the rags-to-riches adventure of two rebellious entrepreneurs who came of age to shape a generation. The vivid portrait reveals why their games are so violent and why their immersion in their brilliantly designed fantasy worlds offered them solace. And it

shows how they channeled their fury and imagination into products that are a formative influence on our culture, from MTV to the Internet to Columbine. This is a story of friendship and betrayal, commerce and artistry—a powerful and compassionate account of what it's like to be young, driven, and wildly creative. “To my taste, the greatest American myth of cosmogenesis features the maladjusted, antisocial, genius teenage boy who, in the insular laboratory of his own bedroom, invents the universe from scratch. *Masters of Doom* is a particularly inspired rendition. Dave Kushner chronicles the saga of video game virtuosi Carmack and Romero with terrific brio. This is a page-turning, mythopoeic cyber-soap opera about two glamorous geek geniuses—and it should be read while scarfing down pepperoni pizza and swilling Diet Coke, with Queens of the Stone Age cranked up all the way.”—Mark Leyner, author of *I Smell Esther Williams*  
*Fundamentals of Software*

*Architecture* - Mark Richards  
2020-01-28

Salary surveys worldwide regularly place software architect in the top 10 best jobs, yet no real guide exists to help developers become architects. Until now. This book provides the first comprehensive overview of software architecture's many aspects. Aspiring and existing architects alike will examine architectural characteristics, architectural patterns, component determination, diagramming and presenting architecture, evolutionary architecture, and many other topics. Mark Richards and Neal Ford—hands-on practitioners who have taught software architecture classes professionally for years—focus on architecture principles that apply across all technology stacks. You'll explore software architecture in a modern light, taking into account all the innovations of the past decade. This book examines:

Architecture patterns: The technical basis for many architectural decisions

Components: Identification, coupling, cohesion, partitioning, and granularity  
Soft skills: Effective team management, meetings, negotiation, presentations, and more  
Modernity: Engineering practices and operational approaches that have changed radically in the past few years  
Architecture as an engineering discipline: Repeatable results, metrics, and concrete valuations that add rigor to software architecture

[Kubernetes Best Practices](#) - Brendan Burns 2019-11-14  
In this practical guide, four Kubernetes professionals with deep experience in distributed systems, enterprise application development, and open source will guide you through the process of building applications with this container orchestration system. Based on the experiences of companies that are running Kubernetes in production successfully, many of the methods are also backed by concrete code examples. This book is ideal for those already familiar with basic Kubernetes concepts who want

to learn common best practices. You'll learn exactly what you need to know to build your best app with Kubernetes the first time. Set up and develop applications in Kubernetes Learn patterns for monitoring, securing your systems, and managing upgrades, rollouts, and rollbacks Understand Kubernetes networking policies and where service mesh fits in Integrate services and legacy applications and develop higher-level platforms on top of Kubernetes Run machine learning workloads in Kubernetes

Fowler - Martin Fowler  
2012-03-09

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often

occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology--from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is

a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include

- Dividing an enterprise application into layers
- The major approaches to organizing business logic
- An in-depth treatment of mapping between objects and relational databases
- Using Model-View-Controller to organize a Web presentation
- Handling concurrency for data that spans multiple transactions
- Designing distributed object interfaces

**Software Architecture** - David M. Dikel 2001  
Presents an approach to software architecture that takes organizational issues into

consideration. The approach uses a series of five principles-- vision, rhythm, anticipation, partnering, and simplification-- to reveal hidden risks and opportunities of software architecture. Complementing these principles are criteria, patterns, and antipatterns. The criteria help assess how well each principle is being performed currently, and the patterns and antipatterns provide guidance on how to apply the principles. c. Book News Inc.

Modern Software Engineering - David Farley 2021-12-10  
Writing for students at all levels of experience, Farley illuminates durable principles at the heart of effective software development. He distills the discipline into two core exercises: first, learning and exploration, and second, managing complexity. For each, he defines principles that can help students improve everything from their mindset to the quality of their code, and describes approaches proven to promote success. Farley's ideas and techniques cohere

into a unified, scientific, and foundational approach to solving practical software development problems within realistic economic constraints. This general, durable, and pervasive approach to software engineering can help students solve problems they haven't encountered yet, using today's technologies and tomorrow's. It offers students deeper insight into what they do every day, helping them create better software, faster, with more pleasure and personal fulfillment.

12 More Essential Skills for Software Architects - Dave Hendricksen 2015

This indispensable new handbook focuses on 12 specific skills every software architect needs to succeed: skills involved in becoming a superior technologist and an outstanding technical champion in your organization. Focuses on three sets of skills that will have the greatest impact on your ability to succeed and ascend: Product Development Skills: Partnership, Discovery,

Modeling, Leverage, and Estimating Oversight Skills: Platform/Project Oversight, Capital Planning, and Risk Management Visionary Skills: Road Mapping, Researching, Trend Awareness, and Branding Unlike most software architecture guides, Hendricksen's books place real-world practice in the context of the development organization and the business, and help you blend the optimal mix of both hard and soft skills. Both valuable initial instruction and a lasting reference, this guide will can help you earn and succeed in your next software architecture role -- in any organization, at any level.

*Essential Software Architecture* - Ian Gorton  
2011-04-27

Job titles like "Technical Architect" and "Chief Architect" nowadays abound in software industry, yet many people suspect that "architecture" is one of the most overused and least understood terms in professional software development. Gorton's book



tries to resolve this dilemma. It concisely describes the essential elements of knowledge and key skills required to be a software architect. The explanations encompass the essentials of architecture thinking, practices, and supporting technologies. They range from a general understanding of structure and quality attributes through technical issues like middleware components and service-oriented architectures to recent technologies like model-driven architecture, software product lines, aspect-oriented design, and the Semantic Web, which will presumably influence future software systems. This second edition contains new material covering enterprise architecture, agile development, enterprise service bus technologies, RESTful Web services, and a case study on how to use the MeDICi integration framework. All approaches are illustrated by an ongoing real-world example. So if you work as an architect or senior designer (or

want to someday), or if you are a student in software engineering, here is a valuable and yet approachable knowledge source for you.

*Linux for Developers* - William Rothwell 2017-04-17

Linux for Developers shows you how to start writing great code for Linux, whether you're a Linux user with little or no coding experience, or an experienced Windows programmer. Leading IT trainer/author William "Bo" Rothwell begins with a clear and up-to-date review of modern open source software, including the licensing arrangements and tradeoffs all developers need to understand. He presents essential skills for both Linux command line and GUI environments, introducing text editors and other tools for efficient coding. Building on this knowledge, Rothwell introduces scripting tools such as Bash, Python, and Perl, as well as traditional object-oriented programming languages such as Java, C++, and C. Finally, he presents a full section on the powerful Git

version control system, teaching skills you can use in Linux and many other environments. Access Linux systems, use GUIs, and work at the command line Learn how Linux organizes files and navigate its filesystem Use basic developer commands such as gzip and grep Edit programs with vi and vim, and explore alternative editors Perform basic sysadmin tasks that developers often need to handle Compare Linux languages to choose the best one for each task Write Bash scripts that interact with users or other shell features Program with Python and Perl: flow control, variables, and more Understand Linux features related to building C, C++, and Java programs Stay on top of complex projects with GIT revision control Work in GIT: staging, committing, branches, diffs, merges, and patches Manage local and remote GIT repositories This guide's modular coverage helps you quickly access whatever information you need right now.

## Design Patterns for Cloud Native Applications - Kasun Indrasiri 2021-05-17

With the immense cost savings and scalability the cloud provides, the rationale for building cloud native applications is no longer in question. The real issue is how. With this practical guide, developers will learn about the most commonly used design patterns for building cloud native applications using APIs, data, events, and streams in both greenfield and brownfield development. You'll learn how to incrementally design, develop, and deploy large and effective cloud native applications that you can manage and maintain at scale with minimal cost, time, and effort. Authors Kasun Indrasiri and Sriskandarajah Suhothayan highlight use cases that effectively demonstrate the challenges you might encounter at each step. Learn the fundamentals of cloud native applications Explore key cloud native communication, connectivity, and composition patterns Learn decentralized

data management techniques  
Use event-driven architecture  
to build distributed and  
scalable cloud native  
applications Explore the most  
commonly used patterns for  
API management and  
consumption Examine some of  
the tools and technologies  
you'll need for building cloud  
native systems

**Design It!** - Michael Keeling  
2017-10-18

Don't engineer by coincidence-  
design it like you mean it!  
Filled with practical  
techniques, *Design It!* is the  
perfect introduction to  
software architecture for  
programmers who are ready to  
grow their design skills. Lead  
your team as a software  
architect, ask the right  
stakeholders the right  
questions, explore design  
options, and help your team  
implement a system that  
promotes the right -ilities.  
Share your design decisions,  
facilitate collaborative design  
workshops that are fast,  
effective, and fun-and develop  
more awesome software! With  
dozens of design methods,

examples, and practical know-  
how, *Design It!* shows you how  
to become a software architect.  
Walk through the core  
concepts every architect must  
know, discover how to apply  
them, and learn a variety of  
skills that will make you a  
better programmer, leader,  
and designer. Uncover the big  
ideas behind software  
architecture and gain  
confidence working on projects  
big and small. Plan, design,  
implement, and evaluate  
software architectures and  
collaborate with your team,  
stakeholders, and other  
architects. Identify the right  
stakeholders and understand  
their needs, dig for  
architecturally significant  
requirements, write amazing  
quality attribute scenarios, and  
make confident decisions.  
Choose technologies based on  
their architectural impact,  
facilitate architecture-centric  
design workshops, and  
evaluate architectures using  
lightweight, effective methods.  
Write lean architecture  
descriptions people love to  
read. Run an architecture

design studio, implement the architecture you've designed, and grow your team's architectural knowledge. Good design requires good communication. Talk about your software architecture with stakeholders using whiteboards, documents, and code, and apply architecture-focused design methods in your day-to-day practice. Hands-on exercises, real-world scenarios, and practical team-based decision-making tools will get everyone on board and give you the experience you need to become a confident software architect.

Python Essential Reference - David Beazley 2009-06-29  
Python Essential Reference is the definitive reference guide to the Python programming language — the one authoritative handbook that reliably untangles and explains both the core Python language and the most essential parts of the Python library. Designed for the professional programmer, the book is concise, to the point, and highly accessible. It also

includes detailed information on the Python library and many advanced subjects that is not available in either the official Python documentation or any other single reference source. Thoroughly updated to reflect the significant new programming language features and library modules that have been introduced in Python 2.6 and Python 3, the fourth edition of Python Essential Reference is the definitive guide for programmers who need to modernize existing Python code or who are planning an eventual migration to Python 3. Programmers starting a new Python project will find detailed coverage of contemporary Python programming idioms. This fourth edition of Python Essential Reference features numerous improvements, additions, and updates: Coverage of new language features, libraries, and modules Practical coverage of Python's more advanced features including generators, coroutines, closures,

metaclasses, and decorators  
Expanded coverage of library modules related to concurrent programming including threads, subprocesses, and the new multiprocessing module  
Up-to-the-minute coverage of how to use Python 2.6's forward compatibility mode to evaluate code for Python 3 compatibility  
Improved organization for even faster answers and better usability  
Updates to reflect modern Python programming style and idioms  
Updated and improved example code  
Deep coverage of low-level system and networking library modules — including options not covered in the standard documentation

## **97 Things Every Software Architect Should Know -**

Richard Monson-Haefel  
2009-02-05

In this truly unique technical book, today's leading software architects present valuable principles on key development issues that go way beyond technology. More than four dozen architects -- including Neal Ford, Michael Nygard, and Bill de hOra -- offer advice

for communicating with stakeholders, eliminating complexity, empowering developers, and many more practical lessons they've learned from years of experience. Among the 97 principles in this book, you'll find useful advice such as:  
Don't Put Your Resume Ahead of the Requirements (Nitin Borwankar)  
Chances Are, Your Biggest Problem Isn't Technical (Mark Ramm)  
Communication Is King; Clarity and Leadership, Its Humble Servants (Mark Richards)  
Simplicity Before Generality, Use Before Reuse (Kevlin Henney)  
For the End User, the Interface Is the System (Vinayak Hegde)  
It's Never Too Early to Think About Performance (Rebecca Parsons)  
To be successful as a software architect, you need to master both business and technology. This book tells you what top software architects think is important and how they approach a project. If you want to enhance your career, *97 Things Every Software Architect Should Know* is

essential reading.

## **12 More Essential Skills for Software Architects** - Dave

Hendricksen 2014-08-22

Master The Crucial Technical Skills Every Software Architect

Needs! To succeed as a software architect, you must master both technical skills and soft skills. Dave

Hendricksen illuminated the soft skills in his highly-regarded 12 Essential Skills for Software Architects. Now, in

12 More Essential Skills for Software Architects he turns to the technical side. Drawing on his decades of experience,

Hendricksen organizes technical skills into three areas. PROJECT SKILLS: driving projects from ideation through delivery

TECHNOLOGY SKILLS: building, buying, and/or leveraging the right technologies VISIONARY

SKILLS: realizing an architectural vision that improves long-term competitiveness He helps you develop and sharpen these key technical skills: from conceptualizing solutions to

developing platforms and governance, and from selecting technology innovations to infusing architectures with an entrepreneurial spirit. This guide reveals the technical skills you need and provides a coherent framework and practical methodology for mastering them. Taken together, Hendricksen's two books offer the most complete, practical pathway to excellence in software architecture.

They'll guide you through every step of your architecture career—from getting the right position to thriving once you have it. Essential Architect Skills Visionary Skills Entrepreneurial Execution Technology Innovation Strategic Roadmapping Technology Skills Governance Platform Development Know-how Architectural Perspective Project Skills Estimation Partnership Discovery Management Conceptualization Dave Hendricksen is a big data architect for Thomson Reuters, where he works closely with the firm's new product development teams to create

innovative legal products for large-scale online platforms such as Westlaw.com. Hendricksen presented “Designing and Building Large-Scale Systems in an Agile World” at Carnegie Mellon University’s influential Software Engineering Institute.

**Designing Embedded Hardware** - John Catsoulis  
2002

Intelligent readers who want to build their own embedded computer systems-- installed in everything from cell phones to cars to handheld organizers to refrigerators-- will find this book to be the most in-depth, practical, and up-to-date guide on the market. Designing Embedded Hardware carefully steers between the practical and philosophical aspects, so developers can both create their own devices and gadgets and customize and extend off-the-shelf systems. There are hundreds of books to choose from if you need to learn programming, but only a few are available if you want to learn to create hardware. Designing Embedded

Hardware provides software and hardware engineers with no prior experience in embedded systems with the necessary conceptual and design building blocks to understand the architectures of embedded systems. Written to provide the depth of coverage and real-world examples developers need, Designing Embedded Hardware also provides a road-map to the pitfalls and traps to avoid in designing embedded systems. Designing Embedded Hardware covers such essential topics as: The principles of developing computer hardware Core hardware designs Assembly language concepts Parallel I/O Analog-digital conversion Timers (internal and external) UART Serial Peripheral Interface Inter-Integrated Circuit Bus Controller Area Network (CAN) Data Converter Interface (DCI) Low-power operation This invaluable and eminently useful book gives you the practical tools and skills to develop, build, and program your own application-

specific computers.

## **The Software Architect**

**Elevator** - Gregor Hohpe  
2020-04-08

As the digital economy changes the rules of the game for enterprises, the role of software and IT architects is also transforming. Rather than focus on technical decisions alone, architects and senior technologists need to combine organizational and technical knowledge to effect change in their company's structure and processes. To accomplish that, they need to connect the IT engine room to the penthouse, where the business strategy is defined. In this guide, author Gregor Hohpe shares real-world advice and hard-learned lessons from actual IT transformations. His anecdotes help architects, senior developers, and other IT professionals prepare for a more complex but rewarding role in the enterprise. This book is ideal for: Software architects and senior developers looking to shape the company's technology direction or assist in an organizational

transformation Enterprise architects and senior technologists searching for practical advice on how to navigate technical and organizational topics CTOs and senior technical architects who are devising an IT strategy that impacts the way the organization works IT managers who want to learn what's worked and what hasn't in large-scale transformation  
*Apprenticeship Patterns* - Dave Hoover 2009-10-02

Are you doing all you can to further your career as a software developer? With today's rapidly changing and ever-expanding technologies, being successful requires more than technical expertise. To grow professionally, you also need soft skills and effective learning techniques. Honing those skills is what this book is all about. Authors Dave Hoover and Adewale Oshineye have cataloged dozens of behavior patterns to help you perfect essential aspects of your craft. Compiled from years of research, many interviews, and feedback from O'Reilly's online



forum, these patterns address difficult situations that programmers, administrators, and DBAs face every day. And it's not just about financial success. Apprenticeship Patterns also approaches software development as a means to personal fulfillment. Discover how this book can help you make the best of both your life and your career. Solutions to some common obstacles that this book explores in-depth include: Burned out at work? "Nurture Your Passion" by finding a pet project to rediscover the joy of problem solving. Feeling overwhelmed by new information? Re-explore familiar territory by building something you've built before, then use "Retreat into Competence" to move forward again. Stuck in your learning? Seek a team of experienced and talented developers with whom you can "Be the Worst" for a while. "Brilliant stuff! Reading this book was like being in a time machine that pulled me back to those key learning moments in my career

as a professional software developer and, instead of having to learn best practices the hard way, I had a guru sitting on my shoulder guiding me every step towards master craftsmanship. I'll certainly be recommending this book to clients. I wish I had this book 14 years ago!"-Russ Miles, CEO, OpenCredo

**Become a Better Software Architect** - Kai Niklas

2019-05-26

Have you ever wondered how software engineers become software architects? Or how software architects become chief architects? This book discusses 12 of the most important skills every software architect should have and how you can develop and improve these skills. This book is different: It provides real, practical made experience with tangible examples which you can immediately apply, as well as actions which focus on long term improvements. Many insights are backed up by scientific studies or thought leaders. Further reading is provided in form of book

references, overviews, templates and videos to dive deeper into your area of interest. It's all about the human: People are creating software. Learn how to make a difference and accelerate your personal performance in an uncertain and increasingly fast-paced world. Unfold your full potential and become a better software architect.

[Become an Awesome Software Architect](#) - Anatoly Volkhover  
2019-10-07

Great software architects aren't born. They are a product of decades of building real-life solutions and relentless learning. They become really good at their trade closer to the retirement age. But most startups are fostered by young entrepreneurs who dare to try but lack the experience. They also lack the \$\$ to hire a silver-haired architect to join their team from day one. Left to their own faculties, the entrepreneurs and their engineering teams quickly get on the path of learning from their own mistakes. Eventually, they discover this is the most

expensive way of learning.

Over time they get better, and some become the true masters of the craft - but way too late to make a difference for their early-day projects. This book is meant to break the vicious circle. It isn't a textbook, at least not in the traditional sense. It is a business-centric practical guide to software architecture, intended for software engineers, technology executives, students of computer science, and tech-savvy entrepreneurs who want to de-risk their entrepreneurial endeavors or to fast-track their careers in software engineering. The recipes in this book are highly practical, battle-tested, and current for building mid- to large-scale systems in 2019.

*Computer Organization and Design RISC-V Edition* - David A. Patterson  
2017-05-12

The new RISC-V Edition of *Computer Organization and Design* features the RISC-V open source instruction set architecture, the first open source architecture designed to be used in modern

computing environments such as cloud computing, mobile devices, and other embedded systems. With the post-PC era now upon us, Computer Organization and Design moves forward to explore this generational change with examples, exercises, and material highlighting the emergence of mobile computing and the Cloud. Updated content featuring tablet computers, Cloud infrastructure, and the x86 (cloud computing) and ARM (mobile computing devices) architectures is included. An online companion Web site provides advanced content for further study, appendices, glossary, references, and recommended reading. Features RISC-V, the first such architecture designed to be used in modern computing environments, such as cloud computing, mobile devices, and other embedded systems Includes relevant examples, exercises, and material highlighting the emergence of mobile computing and the cloud

97 Things Every Programmer Should Know - Kevlin Henney  
2010-02-05

Tap into the wisdom of experts to learn what every programmer should know, no matter what language you use. With the 97 short and extremely useful tips for programmers in this book, you'll expand your skills by adopting new approaches to old problems, learning appropriate best practices, and honing your craft through sound advice. With contributions from some of the most experienced and respected practitioners in the industry--including Michael Feathers, Pete Goodliffe, Diomidis Spinellis, Cay Horstmann, Verity Stob, and many more--this book contains practical knowledge and principles that you can apply to all kinds of projects. A few of the 97 things you should know: "Code in the Language of the Domain" by Dan North "Write Tests for People" by Gerard Meszaros "Convenience Is Not an -ility" by Gregor Hohpe "Know Your IDE" by Heinz

Kabutz "A Message to the Future" by Linda Rising "The Boy Scout Rule" by Robert C. Martin (Uncle Bob) "Beware the Share" by Udi Dahan

**UX Research** - Brad Nunnally  
2016-11-15

One key responsibility of product designers and UX practitioners is to conduct formal and informal research to clarify design decisions and business needs. But there's often mystery around product research, with the feeling that you need to be a research Zen master to gather anything useful. Fact is, anyone can conduct product research. With this quick reference guide, you'll learn a common language and set of tools to help you carry out research in an informed and productive manner. This book contains four sections, including a brief introduction to UX research, planning and preparation, facilitating research, and analysis and reporting. Each chapter includes a short exercise so you can quickly apply what you've learned. Learn what it takes to ask good

research questions Know when to use quantitative and qualitative research methods Explore the logistics and details of coordinating a research session Use softer skills to make research seem natural to participants Learn tools and approaches to uncover meaning in your raw data Communicate your findings with a framework and structure

**Object Thinking** - David West  
2004

Object Thinking blends historical perspective, experience, and visionary insight - exploring how developers can work less like the computers they program and more like problem solvers.

**Bagaimana memenangi hati kawan & mempengaruhi orang lain** - Dale Carnegie  
2010

**Essential Skills for the Agile Developer** - Alan Shalloway  
2011-08-18

Agile has become today's dominant software development paradigm, but agile methods remain difficult

to measure and improve. Essential Skills for the Agile Developer fills this gap from the bottom up, teaching proven techniques for assessing and optimizing both individual and team agile practices. Written by four principals of Net Objectives—one of the world's leading agile training and consulting firms—this book reflects their unsurpassed experience helping organizations transition to agile. It focuses on the specific actions and insights that can deliver the greatest design and programming improvements with economical investment. The authors reveal key factors associated with successful agile projects and offer practical ways to measure them. Through actual examples, they address principles, attitudes, habits, technical practices, and design considerations—and above all, show how to bring all these together to deliver higher-value software. Using the authors' techniques, managers and teams can optimize the whole organization and the

whole product across its entire lifecycle. Essential Skills for the Agile Developer shows how to Perform programming by intention Separate use from construction Consider testability before writing code Avoid over- and under-design Succeed with Acceptance Test Driven Development (ATDD) Minimize complexity and rework Use encapsulation more effectively and systematically Know when and how to use inheritance Prepare for change more successfully Perform continuous integration more successfully Master powerful best practices for design and refactoring

**Refactoring at Scale** - Maude Lemaire 2020-10-13

Making significant changes to large, complex codebases is a daunting task--one that's nearly impossible to do successfully unless you have the right team, tools, and mindset. If your application is in need of a substantial overhaul and you're unsure how to go about implementing those changes in a sustainable way, then this book is for you. Software

engineer Maude Lemaire walks you through the entire refactoring process from start to finish. You'll learn from her experience driving performance and refactoring efforts at Slack during a period of critical growth, including two case studies illustrating the impact these techniques can have in the real world. This book will help you achieve a newfound ability to productively introduce important changes in your codebase. Understand how code degrades and why some degradation is inevitable. Quantify and qualify the state of your codebase before refactoring. Draft a well-scoped execution plan with strategic milestones. Win support from engineering leadership. Build and coordinate a team best suited for the project. Communicate effectively inside and outside your team. Adopt best practices for successfully executing the refactor.

**Microservice Architecture** - Irakli Nadareishvili 2016-07-18  
Have you heard about the tremendous success Amazon

and Netflix have had by switching to a microservice architecture? Are you wondering how this can benefit your company? Or are you skeptical about how it might work? If you've answered yes to any of these questions, this practical book will benefit you. You'll learn how to take advantage of the microservice architectural style for building systems, and learn from the experiences of others to adopt and execute this approach most successfully.

**Drive** - Daniel H. Pink  
2011-04-05

The New York Times bestseller that gives readers a paradigm-shattering new way to think about motivation from the author of *When: The Scientific Secrets of Perfect Timing*. Most people believe that the best way to motivate is with rewards like money—the carrot-and-stick approach. That's a mistake, says Daniel H. Pink (author of *To Sell Is Human: The Surprising Truth About Motivating Others*). In this provocative and persuasive new book, he asserts that the

secret to high performance and satisfaction-at work, at school, and at home—is the deeply human need to direct our own lives, to learn and create new things, and to do better by ourselves and our world.

Drawing on four decades of scientific research on human motivation, Pink exposes the mismatch between what science knows and what business does—and how that affects every aspect of life. He examines the three elements of true motivation—autonomy, mastery, and purpose—and offers smart and surprising techniques for putting these into action in a unique book that will change how we think and transform how we live.

[The Anarchist Cookbook](#) -

William Powell 2018-03-11

The Anarchist Cookbook will shock, it will disturb, it will provoke. It places in historical perspective an era when "Turn on, Burn down, Blow up" are revolutionary slogans of the day. Says the author "This book... is not written for the members of fringe political groups, such as the

Weatherman, or The Minutemen. Those radical groups don't need this book. They already know everything that's in here. If the real people of America, the silent majority, are going to survive, they must educate themselves. That is the purpose of this book." In what the author considers a survival guide, there is explicit information on the uses and effects of drugs, ranging from pot to heroin to peanuts. There is detailed advice concerning electronics, sabotage, and surveillance, with data on everything from bugs to scramblers. There is a comprehensive chapter on natural, non-lethal, and lethal weapons, running the gamut from cattle prods to sub-machine guns to bows and arrows.

**The Pragmatic Programmer**

- Andrew Hunt 1999-10-20

What others in the trenches say about The Pragmatic Programmer... "The cool thing about this book is that it's great for keeping the programming process fresh.

The book helps you to continue

to grow and clearly comes from people who have been there.”

—Kent Beck, author of *Extreme Programming Explained*:

Embrace Change “I found this book to be a great mix of solid advice and wonderful

analogies!” —Martin Fowler, author of *Refactoring* and *UML Distilled*

“I would buy a copy, read it twice, then tell all my colleagues to run out and grab a copy. This is a book I would never loan because I would worry about it being lost.”

—Kevin Ruland, Management Science, MSG-Logistics “The wisdom and practical experience of the authors is obvious. The topics presented are relevant and useful.... By far its greatest strength for me

has been the outstanding analogies—tracer bullets, broken windows, and the fabulous helicopter-based explanation of the need for orthogonality, especially in a crisis situation. I have little doubt that this book will eventually become an excellent source of useful information for journeymen programmers and expert mentors alike.” —John

Lakos, author of *Large-Scale C++ Software Design* “This is the sort of book I will buy a dozen copies of when it comes out so I can give it to my clients.” —Eric Vought, Software Engineer “Most modern books on software development fail to cover the basics of what makes a great software developer, instead spending their time on syntax or technology where in reality the greatest leverage possible for any software team is in having talented developers who really know their craft well. An excellent book.” —Pete McBreen, Independent Consultant “Since reading this book, I have implemented many of the practical suggestions and tips it contains. Across the board, they have saved my company time and money while helping me get my job done quicker! This should be a desktop reference for everyone who works with code for a living.”

—Jared Richardson, Senior Software Developer, iRenaissance, Inc. “I would like to see this issued to every new



employee at my company....”  
—Chris Cleeland, Senior Software Engineer, Object Computing, Inc. “If I’m putting together a project, it’s the authors of this book that I want. . . . And failing that I’d settle for people who’ve read their book.” —Ward Cunningham  
Straight from the programming trenches, *The Pragmatic Programmer* cuts through the increasing specialization and technicalities of modern software development to examine the core process—taking a requirement and producing working, maintainable code that delights its users. It covers topics ranging from personal responsibility and career development to architectural techniques for keeping your code flexible and easy to adapt and reuse. Read this book, and you’ll learn how to Fight software rot; Avoid the trap of duplicating knowledge; Write flexible, dynamic, and adaptable code; Avoid programming by coincidence; Bullet-proof your code with

contracts, assertions, and exceptions; Capture real requirements; Test ruthlessly and effectively; Delight your users; Build teams of pragmatic programmers; and Make your developments more precise with automation. Written as a series of self-contained sections and filled with entertaining anecdotes, thoughtful examples, and interesting analogies, *The Pragmatic Programmer* illustrates the best practices and major pitfalls of many different aspects of software development. Whether you’re a new coder, an experienced programmer, or a manager responsible for software projects, use these lessons daily, and you’ll quickly see improvements in personal productivity, accuracy, and job satisfaction. You’ll learn skills and develop habits and attitudes that form the foundation for long-term success in your career. You’ll become a Pragmatic Programmer.  
[Safety and Security of Cyber-Physical Systems](#) - Frank J.

Furrer 2022-07-20

Cyber-physical systems (CPSs) consist of software-controlled computing devices communicating with each other and interacting with the physical world through sensors and actuators. A CPS has, therefore, two parts: The cyber part implementing most of the functionality and the physical part, i.e., the real world. Typical examples of CPS's are a water treatment plant, an unmanned aerial vehicle, and a heart pacemaker. Because most of the functionality is implemented in software, the software is of crucial importance. The software determines the functionality and many CPS properties, such as safety, security, performance, real-time behavior, etc. Therefore, avoiding safety accidents and security incidents in the CPS requires highly dependable software. Methodology Today, many methodologies for developing safe and secure software are in use. As software engineering slowly becomes disciplined and

mature, generally accepted construction principles have emerged. This monograph advocates principle-based engineering for the development and operation of dependable software. No new development process is suggested, but integrating security and safety principles into existing development processes is demonstrated. Safety and Security Principles At the core of this monograph are the engineering principles. A total of 62 principles are introduced and catalogized into five categories: Business & organization, general principles, safety, security, and risk management principles. The principles are rigorous, teachable, and enforceable. The terminology used is precisely defined. The material is supported by numerous examples and enriched by illustrative quotes from celebrities in the field. Final Words «In a cyber-physical system's safety and security, any compromise is a planned disaster» Audience First, this monograph is for organizations

that want to improve their methodologies to build safe and secure software for mission-critical cyber-physical systems. Second, the material is suitable for a two-semester, 4 hours/week, advanced computer science lecture at a Technical University. This textbook has been recommended and developed for university courses in Germany, Austria and Switzerland.

**The Innovator's DNA** - Jeff Dyer 2011-07-12

A new classic, cited by leaders and media around the globe as a highly recommended read for anyone interested in innovation. In *The Innovator's DNA*, authors Jeffrey Dyer, Hal Gregersen, and bestselling author Clayton Christensen (*The Innovator's Dilemma*, *The Innovator's Solution*, *How Will You Measure Your Life?*) build on what we know about disruptive innovation to show how individuals can develop the skills necessary to move progressively from idea to impact. By identifying behaviors of the world's best

innovators—from leaders at Amazon and Apple to those at Google, Skype, and Virgin Group—the authors outline five discovery skills that distinguish innovative entrepreneurs and executives from ordinary managers: Associating, Questioning, Observing, Networking, and Experimenting. Once you master these competencies (the authors provide a self-assessment for rating your own innovator's DNA), the authors explain how to generate ideas, collaborate to implement them, and build innovation skills throughout the organization to result in a competitive edge. This innovation advantage will translate into a premium in your company's stock price—an innovation premium—which is possible only by building the code for innovation right into your organization's people, processes, and guiding philosophies. Practical and provocative, *The Innovator's DNA* is an essential resource for individuals and teams who want to strengthen their innovative prowess.

*HTTP: The Definitive Guide* -

David Gourley 2002-09-27

Covers topics including HTTP methods and status codes, optimizing proxies, designing web crawlers, content negotiation, and load-balancing strategies.

**The Pragmatic Programmer**

- David Thomas 2019-07-30

“One of the most significant books in my life.” -Obie Fernandez, Author, *The Rails Way* “Twenty years ago, the first edition of *The Pragmatic Programmer* completely changed the trajectory of my career. This new edition could do the same for yours.” -Mike Cohn, Author of *Succeeding with Agile*, *Agile Estimating and Planning*, and *User Stories Applied* “. . . filled with practical advice, both technical and professional, that will serve you and your projects well for years to come.”

-Andrea Goulet, CEO, Corgibytes, Founder, LegacyCode.Rocks “. . . lightning does strike twice, and this book is proof.” -VM (Vicky) Bresseur, Director of Open Source Strategy, Juniper

*Networks The Pragmatic Programmer* is one of those rare tech books you’ll read, re-read, and read again over the years. Whether you’re new to the field or an experienced practitioner, you’ll come away with fresh insights each and every time. Dave Thomas and Andy Hunt wrote the first edition of this influential book in 1999 to help their clients create better software and rediscover the joy of coding. These lessons have helped a generation of programmers examine the very essence of software development, independent of any particular language, framework, or methodology, and the Pragmatic philosophy has spawned hundreds of books, screencasts, and audio books, as well as thousands of careers and success stories. Now, twenty years later, this new edition re-examines what it means to be a modern programmer. Topics range from personal responsibility and career development to architectural techniques for keeping your code flexible and

easy to adapt and reuse. Read this book, and you'll learn how to: Fight software rot Learn continuously Avoid the trap of duplicating knowledge Write flexible, dynamic, and adaptable code Harness the power of basic tools Avoid programming by coincidence Learn real requirements Solve the underlying problems of concurrent code Guard against security vulnerabilities Build teams of Pragmatic Programmers Take responsibility for your work and career Test ruthlessly and effectively, including property-based testing Implement the Pragmatic Starter Kit Delight your users Written as a series of self-contained sections and filled with classic and fresh anecdotes, thoughtful examples, and interesting analogies, *The Pragmatic Programmer* illustrates the best approaches and major pitfalls of many different aspects of software development. Whether you're a new coder, an experienced programmer, or a manager responsible for software

projects, use these lessons daily, and you'll quickly see improvements in personal productivity, accuracy, and job satisfaction. You'll learn skills and develop habits and attitudes that form the foundation for long-term success in your career. You'll become a Pragmatic Programmer. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

**Software Architecture: The Hard Parts** - Neal Ford  
2021-09-23

There are no easy decisions in software architecture. Instead, there are many hard parts--difficult problems or issues with no best practices--that force you to choose among various compromises. With this book, you'll learn how to think critically about the trade-offs involved with distributed architectures. Architecture veterans and practicing consultants Neal Ford, Mark Richards, Pramod Sadalage, and Zhamak Dehghani discuss

strategies for choosing an appropriate architecture. By interweaving a story about a fictional group of technology professionals--the Sysops Squad--they examine everything from how to determine service granularity, manage workflows and orchestration, manage and decouple contracts, and manage distributed transactions to how to optimize operational characteristics, such as scalability, elasticity, and performance. By focusing on commonly asked questions, this book provides techniques to help you discover and weigh the trade-offs as you confront the issues you face as an architect. Analyze trade-offs and effectively document your decisions Make better decisions regarding service granularity Understand the complexities of breaking apart monolithic applications Manage and decouple contracts between services Handle data in a highly distributed architecture Learn patterns to manage workflow and transactions when

breaking apart applications

**Seeking SRE** - David N. Blank-Edelman 2018-08-21

Organizations big and small have started to realize just how crucial system and application reliability is to their business. They've also learned just how difficult it is to maintain that reliability while iterating at the speed demanded by the marketplace. Site Reliability Engineering (SRE) is a proven approach to this challenge. SRE is a large and rich topic to discuss. Google led the way with Site Reliability Engineering, the wildly successful O'Reilly book that described Google's creation of the discipline and the implementation that's allowed them to operate at a planetary scale. Inspired by that earlier work, this book explores a very different part of the SRE space. The more than two dozen chapters in Seeking SRE bring you into some of the important conversations going on in the SRE world right now. Listen as engineers and other leaders in the field discuss: Different ways of implementing SRE and

SRE principles in a wide variety of settings How SRE relates to other approaches such as DevOps Specialties on the cutting edge that will soon be commonplace in SRE Best practices and technologies that make practicing SRE easier The important but rarely explored human side of SRE David N. Blank-Edelman is the book's curator and editor.

## **12 Essential Skills for Software Architects** - Dave Hendricksen 2012

Master the Crucial Non - Technical Skills Every Software Architect Needs! Thousands of software professionals have the necessary technical qualifications to become architects, but far fewer have the crucial non-technical skills needed to get hired and succeed in this role. In today's agile environments, these "soft" skills have grown even more crucial to success as an architect. For many developers, however, these skills don't come naturally-and they're rarely addressed in formal training. Now, long-time

software architect Dave Hendricksen helps you fill this gap, supercharge your organizational impact, and quickly move to the next level in your career. In *12 Essential Skills for Software Architects*, Hendricksen begins by pinpointing the specific relationship, personal, and business skills that successful architects rely upon. Next, he presents proven methods for systematically developing and sharpening every one of these skills, from negotiation and leadership to pragmatism and vision. From start to finish, this book's practical insights can help you get the architect position you want-and thrive once you have it! The soft skills you need... ..and a coherent framework and practical methodology for mastering them! Relationship skills Leadership, politics, gracious behavior, communication, negotiation Personal skills Context switching, transparency, passion Business skills Pragmatism, vision, business knowledge, innovation