

Debugging Teams Better Productivity Through Collaboration

Use this collection of best practices and tips for assessing the health of a solution. This book provides detailed techniques and instructions to quickly diagnose aspects of your Azure cloud solutions. The initial chapters of this book introduce you to the many facets of Microsoft Azure, explain why and how building for the cloud differs from on-premise development, and outline the need for a comprehensive strategy to debugging and profiling in Azure. You learn the major types of blades (FaaS, SaaS, PaaS, IaaS), how different views can be created for different scenarios, and you will become familiar with the Favorites section, Cost Management & Billing blade, support, and Cloud Shell. You also will know how to leverage Application Insights for application performance management, in order to achieve a seamless cloud development experience. Application Insights, Log Analytics, and database storage topics are covered. The authors further guide you on identity security with Azure AD and continuous delivery with CI and CD covered in detail along with the capabilities of Azure DevOps. And you are exposed to external tooling and trouble shooting in a production environment. After reading this book, you will be able to apply methods to key Azure services, including App Service (Web Apps, Function Apps, and Logic Apps), Cloud Services, Azure Container Service, Azure Active Directory, Azure Storage, Azure SQL Database, Cosmos DB, Log Analytics, and many more. What You Will Learn Debug and manage the performance of your applications Leverage Application Insights for application performance management Extend and automate CI/CD with the help of various build tools, including Azure DevOps, TeamCity, and Cake bootstrapper Who This Book Is For Application developers, designers, and DevOps personnel who want to find a one-stop shop in best practices for managing their application's performance in the cloud and for debugging the issues accordingly

Carefully researched over ten years and eagerly anticipated by the agile community, Crystal Clear: A Human-Powered Methodology for Small Teams is a lucid and practical introduction to running a successful agile project in your organization. Each chapter illuminates a different important aspect of orchestrating agile projects. Highlights include Attention to the essential human and communication aspects of successful projects Case studies, examples, principles, strategies, techniques, and guiding properties Samples of work products from real-world projects instead of blank templates and toy problems Top strategies used by software teams that excel in delivering quality code

*in a timely fashion Detailed introduction to emerging best-practice techniques, such as Blitz Planning, Project 360°, and the essential Reflection Workshop Question-and-answer with the author about how he arrived at these recommendations, including where they fit with CMMI, ISO, RUP, XP, and other methodologies A detailed case study, including an ISO auditor's analysis of the project Perhaps the most important contribution this book offers is the Seven Properties of Successful Projects. The author has studied successful agile projects and identified common traits they share. These properties lead your project to success; conversely, their absence endangers your project. The #1 guide to using Visual Studio 2010 in team development: insider coverage of this huge release, from the leader of the VSTS team * *Focuses on succeeding with new VS 2010 ALM products in real-world environments, with exclusive 'Lessons Learned at Microsoft' . *Thoroughly covers VS 2010's massive new capabilities for team development. *Contains extensive new coverage of implementing Scrum and related practices. *Covers the entire lifecycle: requirements, architecture, construction, build, test, and more This is the most practical, valuable guide for every member of the software team who intends to run or participate in software projects using Microsoft's Visual Studio 2010. Written by a top Microsoft Visual Studio development team leader and a leading Visual Studio implementation consultant, it focuses on the real challenges development organizations face. The authors identify powerful lessons and best practices learned at Microsoft, and cover the entire development lifecycle, from requirements gathering through testing and beyond. This edition adds extensive coverage of VS 2010's extensive new team features, as well as new coverage of using VS 2010 to actively support teams that practice Scrum. Throughout, the authors focus on showing how to use VS 2010 to reduce waste, increase transparency, and accelerate the flow of value to the end customer. Coverage includes: * *Requirements: vision, user stories, use cases, storyboards, satisfiers/dissatisfiers, and more *Running the project: self-managing teams, metrics, sprints, and dashboards *'Value-up' views of software architecture, construction, and testing. *Build and lab: check-in, team build, continuous integration, build verification tests, reporting, deployment, and lab automation/virtualization. *Troubleshooting the project: overcoming issues ranging from scope creep to build failures*

Debugging Teams Better Productivity Through Collaboration

The Motivation Toolkit: How to Align Your Employees' Interests with Your Own

A Human-Powered Methodology for Small Teams

Visual Studio 2019 Tricks and Techniques
Python Programming for Hackers and Reverse Engineers
97 Things Every Cloud Engineer Should Know
Debugging by Thinking

When you write software, you need to be at the top of your game. Great programmers practice to keep their skills sharp. Get sharp and stay sharp with more than fifty practice exercises rooted in real-world scenarios. If you're a new programmer, these challenges will help you learn what you need to break into the field, and if you're a seasoned pro, you can use these exercises to learn that hot new language for your next gig. One of the best ways to learn a programming language is to use it to solve problems. That's what this book is all about. Instead of questions rooted in theory, this book presents problems you'll encounter in everyday software development. These problems are designed for people learning their first programming language, and they also provide a learning path for experienced developers to learn a new language quickly. Start with simple input and output programs. Do some currency conversion and figure out how many months it takes to pay off a credit card. Calculate blood alcohol content and determine if it's safe to drive. Replace words in files and filter records, and use web services to display the weather, store data, and show how many people are in space right now. At the end you'll tackle a few larger programs that will help you bring everything together. Each problem includes constraints and challenges to push you further, but it's up to you to come up with the solutions. And next year, when you want to learn a new programming language or style of programming (perhaps OOP vs. functional), you can work through this book again, using new approaches to solve familiar problems. What You Need: You need access to a computer, a programming language reference, and the programming language you want to use.

Managing people is difficult wherever you work. But in the tech industry, where management is also a technical discipline, the learning curve can be brutal—especially when there are few tools, texts, and frameworks to help you. In this practical guide, author Camille Fournier (tech lead turned CTO) takes you through each stage in the journey from engineer to technical manager. From mentoring interns to working with senior staff, you'll get actionable advice for approaching various obstacles in your path. This book is ideal whether you're a new manager, a mentor, or a more experienced leader looking for fresh advice. Pick up this book and learn how to become a better manager and leader in your organization. Begin by exploring what you expect from a manager Understand what it takes to be a good mentor, and a good tech lead Learn how to manage individual members while remaining focused on the entire team Understand how to manage yourself and avoid common pitfalls that challenge many leaders Manage multiple teams and learn how to manage managers Learn how to build and bootstrap a unifying culture in teams

Presents practical advice on the disciplines, techniques, tools, and practices of computer programming and how to approach software development with a sense of pride, honor, and self-respect.

Anyone who develops software for a living needs a proven way to produce it better, faster, and cheaper. The Productive Programmer offers critical timesaving and productivity tools that you can adopt right away, no matter what platform you use. Master developer Neal Ford not only offers advice on the mechanics of productivity-how to work smarter, spurn interruptions, get the most out your computer, and avoid repetition-he also details valuable practices that will help you elude common traps, improve your code, and become more valuable to your team. You'll learn to: Write the test before you write the code Manage the lifecycle of your objects fastidiously Build only what you need now, not what you might need later Apply ancient philosophies to software development Question authority, rather than blindly adhere to standards Make hard things easier and impossible things possible through meta-programming Be sure all code within a method is at the same level of abstraction Pick the right editor and assemble the best tools for the job This isn't theory, but the fruits of Ford's real-world experience as an Application Architect at the global IT consultancy ThoughtWorks. Whether you're a beginner or a pro with years of experience, you'll improve your work and your career with the simple and straightforward principles in The Productive Programmer.

From Journeyman to Master

The Effective Engineer

A Guide for Tech Leaders Navigating Growth and Change

Change Your Mind, Change Your Life

The Productive Programmer

The Complete Reference from the Creator of the Fiddler Web Debugger

Java Cookbook

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.

Python is fast becoming the programming language of choice for hackers, reverse engineers, and software testers because it's easy to write quickly, and it has the low-level support and libraries that make hackers happy. But until now, there has been no real manual on how to use Python for a variety of hacking tasks. You had to dig through forum posts and man pages, endlessly tweaking your own code to get everything working. Not anymore. Gray Hat Python explains the concepts behind hacking tools and techniques like debuggers, trojans, fuzzers, and emulators. But author Justin Seitz goes beyond theory, showing you how to harness existing Python-based security tools—and how to build your own when the pre-built ones won't cut it. You'll learn how to: –Automate tedious reversing and security tasks –Design and program your own debugger –Learn how to fuzz Windows drivers and create powerful fuzzers from scratch –Have fun with code and library injection, soft and hard hooking techniques, and other software trickery –Sniff secure traffic out of an encrypted web browser session –Use PyDBG, Immunity Debugger, Sulley, IDAPython, PyEMU, and more The world's best hackers are using Python to do their handiwork. Shouldn't you?

This carefully crafted ebook: "Winesburg, Ohio (A Group of Tales of Ohio Small-Town Life)" is formatted for your eReader with a functional and detailed table of contents. This ebook is a series of loosely linked short stories set in the fictional town of Winesburg, mostly written from late 1915 to early 1916. The stories are held together by George Willard, a resident to whom the community confide their personal stories and struggles. The townspeople are withdrawn and emotionally repressed and attempt in telling their stories to gain some sense of meaning and dignity in an otherwise desperate life. The work has received high critical acclaim and is considered one of the great American works of the 20th century. Sherwood Anderson (1876 – 1941) was an American novelist and short story writer, known for subjective and self-revealing works. Anderson

published several short story collections, novels, memoirs, books of essays, and a book of poetry. He may be most influential for his effect on the next generation of young writers, as he inspired William Faulkner, Ernest Hemingway, John Steinbeck, and Thomas Wolfe.

Debugging by Thinking: A Multi-Disciplinary Approach is the first book to apply the wisdom of six disciplines—logic, mathematics, psychology, safety analysis, computer science, and engineering—to the problem of debugging. It uses the methods of literary detectives such as Sherlock Holmes, the techniques of mathematical problem solving, the results of research into the cognitive psychology of human error, the root cause analyses of safety experts, the compiler analyses of computer science, and the processes of modern engineering to define a systematic approach to identifying and correcting software errors. * Language Independent Methods: Examples are given in Java and C++ * Complete source code shows actual bugs, rather than contrived examples * Examples are accessible with no more knowledge than a course in Data Structures and Algorithms requires * A "thought process diary" shows how the author actually resolved the problems as they occurred

Agile Software Engineering with Visual Studio

Firebug 1.5

Solutions and Examples for Java Developers

Seeking SRE

A developer's guide to writing better code and maximizing productivity

Scaling Teams

Best practices, tips, and techniques for collaborating productively with distributed development teams

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.

Software engineering is a team sport, and a team's culture deeply affects each contributor's productivity and happiness. We'll discuss specific best practices for building strong, self-sustaining cultures. We'll also talk about how to lead your reports rather than "managing" them, and exactly what sort of things great leaders do and don't do in building high-functioning teams. You'll learn why investing in these soft skills are at least as important as technological factors when it comes to success.

In a perfect world, software engineers who produce the best code are the most successful. But in our perfectly messy world, success also depends on how you work with people to get your job done. In this highly entertaining book, Brian Fitzpatrick and Ben Collins-Sussman cover basic patterns and anti-patterns for working with other people, teams, and users while trying to develop software. This is valuable information from two respected software engineers whose popular series of talks—including "Working with Poisonous People"—has attracted hundreds of thousands of followers. Writing software is a team sport, and human factors have as much influence on the outcome as technical factors. Even if you've spent decades learning the technical side of programming, this book teaches you about the often-overlooked human component. By learning to collaborate and investing in the "soft skills" of software engineering, you can have a much greater impact for the same amount of effort. Team Geek was named as a Finalist in the 2013 Jolt Awards from Dr. Dobb's Journal. The publication's panel of judges chose five notable books, published during a 12-month period ending June 30, that every serious programmer should read.

From lambda expressions and JavaFX 8 to new support for network programming and mobile development, Java 8 brings a wealth of changes. This cookbook helps you get up to speed right away with hundreds of hands-on recipes across a broad range of Java topics. You'll learn useful techniques for everything from debugging and data structures to GUI development and functional programming. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they work. If you are familiar with Java basics, this cookbook

will bolster your knowledge of the language in general and Java 8's main APIs in particular. Recipes include: Methods for compiling, running, and debugging Manipulating, comparing, and rearranging text Regular expressions for string- and pattern-matching Handling numbers, dates, and times Structuring data with collections, arrays, and other types Object-oriented and functional programming techniques Directory and filesystem operations Working with graphics, audio, and video GUI development, including JavaFX and handlers Network programming on both client and server Database access, using JPA, Hibernate, and JDBC Processing JSON and XML for data storage Multithreading and concurrency

Gray Hat Python

Better Productivity through Collaboration

Code Complete

Rebels at Work

Rethinking Productivity in Software Engineering

Strategies for Building Successful Teams and Organizations

Lessons Learned from Programming Over Time

Use Windows debuggers throughout the development cycle—and build better software Rethink your use of Windows debugging and tracing tools—and learn how to make them a key part of test-driven software development. Led by a member of the Windows Fundamentals Team at Microsoft, you'll apply expert debugging and tracing techniques—and sharpen your C++ and C# code analysis skills—through practical examples and common scenarios. Learn why experienced developers use debuggers in every step of the development process, and not just when bugs appear. Discover how to: Go behind the scenes to examine how powerful Windows debuggers work Catch bugs early in the development cycle with static and runtime analysis tools Gain practical strategies to tackle the most common code defects Apply expert tricks to handle user-mode and kernel-mode debugging tasks Implement postmortem techniques such as JIT and dump debugging Debug the concurrency and security aspects of your software Use debuggers to analyze interactions between your code and the operating system Analyze software behavior with Xperf and the Event Tracing for Windows (ETW) framework

Why This Book? You can learn the most popular frameworks, use the best programming languages, and work at the biggest tech companies, but if you cultivate bad habits, it will be hard for you to become a top developer. This book doesn't offer a straight path or pre-defined formula of success. This book is a result of a quest. A quest to uncover what habits can be cultivated to become a better software engineer. "I wish I had access to this book while I was starting in the software

industry. The information presented is not only logical, not only personal, but very well backed up by many expert opinions throughout the book. A must-read, for both beginners and experts alike." - Zachary Sohovich, Software Engineer at Nike

What Will You Read? How to keep up with all the new technologies What should you focus? Being a specialist or generalist? How to stay productive and not feel overwhelmed The importance of estimating tasks correctly How to approach new side project ideas And much more

Who Should Read This Book? It doesn't matter if you're a Junior or Senior developer. It doesn't matter how experienced you are. This book can help you cultivate new habits or rethink existing behaviors. What's Inside? This is not a traditional book. You won't find the same format or structure that a regular book has. In fact, this book was designed to be as simple and objective as possible. You can follow the order of chapters, or you can read them individually. Everything is standalone and doesn't depend on previous knowledge. At the end of each chapter, you'll find a section marked as "Questions & Answers", where I interview senior developers and tech leads from various companies to understand how they got there. I went after tech giants such as Google, Amazon, Microsoft, and Adobe. Powerful startups such as GitHub, Spotify, Elastic, Segment, GoDaddy, and Shopify. All the way to established organizations such as Citibank, BlackBerry, and The New York Times. These people come from all over the world and have a pretty diverse background. From San Francisco to New York. From São Paulo to Montreal. From London to Stockholm. The idea is to present you not a one man's point of view, but a collection of insights on how to navigate your career.

Who's The Author? Zeno Rocha is a Brazilian creator and programmer. He currently lives in Los Angeles, California, where he's the Chief Product Officer at Liferay Cloud. His lifelong appreciation for building software and sharing knowledge led him to speak in over 110 conferences worldwide. His passion for open source put him on the top 20 most active users on GitHub at age 22. Before moving to the US, Zeno developed multiple applications, mentored startups, and worked at major companies in Latin America, such as Globo and Petrobras. A step-by-step description of each key feature is provided with the help of simple, easy-to-understand examples. There are plenty of useful screenshots in each chapter. Every chapter contains information as well as tips and tricks to draw your attention towards some useful information or reference. Each aspect of web development like CSS or JavaScript is handled independently so that you can refer to those modules in which you are interested. This book is written for frontend web developers building software and pages using HTML, CSS, JavaScript, and AJAX, who want to learn Firebug for the reasons

outlined above. The book assumes that readers have a very basic knowledge of HTML, JavaScript, and CSS. The examples in the book can be understood by someone who has just been introduced to web development.

Fiddler is a Web Debugging Proxy platform that monitors and modifies web traffic. This freeware tool enables developers, testers, and enthusiasts to inspect traffic, set breakpoints, and "fiddle" with incoming or outgoing data. Fiddler includes powerful event-based scripting, and can be extended using any .NET language. FiddlerCore, the core proxy engine underlying Fiddler, is available to integrate into any .NET application. In this book, you'll learn to fully exploit the power of Fiddler to debug traffic from virtually any web-related application, including Internet Explorer, Google Chrome, Apple Safari, Mozilla Firefox, Opera, and thousands more. You'll see how to debug HTTPS traffic, and use Fiddler with popular devices like iPhone/iPod/iPad, Windows Phone, and others. After exploring the hundreds of built-in features, you'll learn to extend Fiddler using the FiddlerScript engine or build your own applications atop the FiddlerCore class library.

66 Specific Ways to Debug Software and Systems

Exercises for Programmers

How to Leverage Your Efforts in Software Engineering to Make a Disproportionate and Meaningful Impact

Winesburg, Ohio (A Group of Tales of Ohio Small-Town Life)

Editing, Debugging, and Monitoring Web Pages

Software Engineering at Google

Being Geek

Widely considered one of the best practical guides to programming, Steve McConnell's original CODE COMPLETE has been helping developers write better software for more than a decade. Now this classic book has been fully updated and revised with leading-edge practices—and hundreds of new code samples—illustrating the art and science of software construction. Capturing the body of knowledge available from research, academia, and everyday commercial practice, McConnell synthesizes the most effective techniques and must-know principles into clear, pragmatic guidance. No matter what your experience level, development environment, or project size, this book will inform and stimulate your thinking—and help you build the highest quality code. Discover the timeless techniques and strategies that help you: Design for minimum complexity and maximum creativity Reap the benefits of collaborative development Apply defensive programming techniques to reduce and flush out

errors Exploit opportunities to refactor—or evolve—code, and do it safely Use construction practices that are right-weight for your project Debug problems quickly and effectively Resolve critical construction issues early and correctly Build quality into the beginning, middle, and end of your project

Introducing *The Effective Engineer*--the only book designed specifically for today's software engineers, based on extensive interviews with engineering leaders at top tech companies, and packed with hundreds of techniques to accelerate your career.

A practical guide for developers, development teams, and managers to successfully implement remote pair programming techniques and styles that better fit their organization's environment **Key Features** Implement remote pair programming best practices in your organization to increase productivity in software development teams Overcome the challenges in communication while working with distributed teams across the globe Explore remote pair programming tools and learn smart ways to use them efficiently **Book Description** Remote pair programming takes pair programming practices to the next level by allowing you and your team members to work effectively in distributed teams. This helps ensure that you continuously improve code quality, share equal ownership of the code, facilitate knowledge sharing, and reduce bugs in your code. If you want to adopt remote pair programming within your development team, this book is for you.

Practical Remote Pair Programming takes you through various techniques and best practices for working with the wide variety of tools available for remote pair programming. You'll understand the significance of pair programming and how it can help improve communication within your team. As you advance, you'll get to grips with different remote pair programming strategies and find out how to choose the most suitable style for your team and organization. The book will take you through the process of setting up video and audio tools, screen sharing tools, and the integrated development environment (IDE) for your remote pair programming setup. You'll also be able to enhance your remote pair programming experience with source control and remote access tools. By the end of this book, you'll have the confidence to drive the change of embracing remote pair programming in your organization and guide your peers to improve productivity

while working remotely. What you will learn

- Develop a structured organizational approach to implementing pair programming and using it effectively
- Understand how pair programming fosters better communication inside and outside the team
- Organize remote pair programming and choose the right style for your organization
- Set up screen sharing, IDE, source control rules, audio, and video for your remote pair programming setup
- Use various pair programming techniques and styles in the context of a remote environment
- Enhance your remote pair programming experience with source control and remote access tools

Who this book is for This book is for any developer who wants to understand the different practical aspects involved in remote pair programming and adopt them in their existing development teams. If you're a team leader or technical manager, this book will serve as a manual for implementing remote pair programming covering the best resources for you to manage communication and collaboration using pair programming with your team members working remotely in distributed teams.

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

From Concept to Continuous Feedback

The Software Developer's Career Handbook

Programming Embedded Systems

66 Ways Experts Think

A Handbook for Leading Change from Within

Site Reliability Engineering

Crystal Clear

In the course of their 20+-year engineering careers, authors Brian Fitzpatrick and Ben Collins-Sussman have picked up a treasure trove of wisdom and anecdotes about how successful teams work together. Their conclusion? Even among people who have spent decades learning the technical side of their jobs, most haven't really focused on the human component. Learning to collaborate is just as important to success. If you invest in the "soft skills" of your job, you can have a much greater impact for the same amount of effort. The authors share their insights on how to lead a team effectively, navigate an organization, and build a healthy relationship with the users of your software. This is valuable information from two respected software engineers whose popular series of talks—including "Working with Poisonous People"—has attracted hundreds of thousands of followers.

Authored by two of the leading authorities in the field, this guide offers readers the knowledge and skills needed to achieve proficiency with embedded software.

*As a software engineer, you recognize at some point that there's much more to your career than dealing with code. Is it time to become a manager? Tell your boss he's a jerk? Join that startup? Author Michael Lopp recalls his own make-or-break moments with Silicon Valley giants such as Apple, Netscape, and Symantec in *Being Geek* -- an insightful and entertaining book that will help you make better career decisions. With more than 40 standalone stories, Lopp walks through a complete job life cycle, starting with the job interview and ending with the realization that it might be time to find another gig. Many books teach you how to interview for a job or how to manage a project successfully, but only this book helps you handle the baffling circumstances you may encounter throughout your career. Decide what you're worth with the chapter on "The Business" Determine the nature of the miracle your CEO wants with "The Impossible" Give effective presentations with "How Not to Throw Up" Handle liars and people with devious agendas with "Managing Werewolves" Realize when you should be looking for a new gig with "The Itch"*

*Get the most out of this foundational reference and improve the productivity of your software teams. This open access book collects the wisdom of the 2017 "Dagstuhl" seminar on productivity in software engineering, a meeting of community leaders, who came together with the goal of rethinking traditional definitions and measures of productivity. The results of their work, *Rethinking Productivity in Software Engineering*, includes chapters covering definitions and core concepts related to productivity, guidelines for measuring productivity in specific contexts, best practices and pitfalls, and theories and open questions on productivity. You'll benefit from the many short chapters, each offering a focused discussion on one aspect of productivity in software engineering. Readers in many fields and industries will benefit from their collected work. Developers wanting to improve their personal productivity, will learn effective strategies for overcoming common issues that interfere with progress. Organizations thinking about building internal programs for measuring productivity of*

programmers and teams will learn best practices from industry and researchers in measuring productivity. And researchers can leverage the conceptual frameworks and rich body of literature in the book to effectively pursue new research directions. What You'll Learn Review the definitions and dimensions of software productivity See how time management is having the opposite of the intended effect Develop valuable dashboards Understand the impact of sensors on productivity Avoid software development waste Work with human-centered methods to measure productivity Look at the intersection of neuroscience and productivity Manage interruptions and context-switching Who Book Is For Industry developers and those responsible for seminar-style courses that include a segment on software developer productivity. Chapters are written for a generalist audience, without excessive use of technical terminology.

The Pragmatic Programmer

Inside Windows Debugging

Agile Conversations

14 Habits of Highly Productive Developers

The Manager's Path

57 Challenges to Develop Your Coding Skills

Debugging Your Brain

Leading a fast-growing team is a uniquely challenging experience. Startups with a hot product often double or triple in size quickly—a recipe for chaos if company leaders aren't prepared for the pitfalls of hyper-growth. If you're leading a startup or a new team between 10 and 150 people, this guide provides a practical approach to managing your way through these challenges. Each section covers essential strategies and tactics for managing growth, starting with a single team and exploring typical scaling points as the team grows in size and complexity. The book also provides many examples and lessons learned, based on the authors' experience and interviews with industry leaders. Learn how to make the most of:

- Hiring: Learn a scalable hiring process for growing your team
- People management: Use 1-on-1 mentorship, dispute resolution, and other techniques to ensure your team is happy and productive
- Organization: Motivate employees by applying five organizational design principles
- Culture: Build a culture that can evolve as you grow, while remaining connected to the team's core values
- Communication: Ensure that important information—and only the important stuff—gets through

Your brain is a complex system. Patch the software that runs in your mind.

Renowned Stanford economist David M. Kreps reveals the fundamental principles of employee motivation. Getting your employees to do their best work has never been easy. But it is a particular challenge for knowledge workers, who must attend to many different tasks and whose to-do list is often ambiguous, requiring outside-the-box thinking. Lists of dos and don'ts are rarely effective. Instead, your best bet is to align their interests with your own—the heart of motivation—and set them free to use their own drive and creativity on their, and your, behalf. But how do you align their interests with your own? How do you avoid incentive schemes that warp priorities, encourage perfunctory and sloppy work, or cause unethical behavior? In *The Motivation Toolkit*, economist and management expert David Kreps offers a variety of tools, drawn from the disciplines of economics and social psychology, that you can adapt to your specific situation to achieve better motivation. This starts with understanding both the economic and social relationship your employees have with their work, their jobs, and your organization, then using that understanding to find economic or psychological motivators that will work. Whatever your business, and whether you're a newly minted manager, a seasoned

executive hungry for your employees' best work, or a curious leader looking for new ways to be effective, *The Motivation Toolkit* will prove a useful and enlightening read.

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

Debug Your Mental Software

A Multidisciplinary Approach

Software Design Decoded

Team Geek

The Clean Coder

Effective Debugging

A Software Developer's Guide to Working Well with Others

An engaging, illustrated collection of insights revealing the practices and principles that expert software designers use to create great software. What makes an expert software designer? It is more than experience or innate ability. Expert software designers have specific habits, learned practices, and observed principles that they apply deliberately during their design work. This book offers sixty-six insights, distilled from years of studying experts at work, that capture what successful software designers actually do to create great software. The book presents these insights in a series of two-page illustrated spreads, with the principle and a short explanatory text on one page, and a drawing on the facing page. For example, "Experts generate alternatives" is illustrated by the same few balloons turned into a set of very different balloon animals. The text is engaging and accessible; the drawings are thought-provoking and often playful. Organized into such categories as "Experts reflect," "Experts are not afraid," and "Experts break the rules," the insights range from "Experts prefer simple solutions" to "Experts see error as opportunity." Readers learn that "Experts involve the user"; "Experts take inspiration from wherever they can"; "Experts design throughout the creation of software"; and "Experts draw the problem as much as they draw the solution." One habit for an aspiring expert software

designer to develop would be to read and reread this entertaining but essential little book. The insights described offer a guide for the novice or a reference for the veteran—in software design or any design profession. A companion web site provides an annotated bibliography that compiles key underpinning literature, the opportunity to suggest additional insights, and more.

A successful digital transformation must start with a conversational transformation. Today, software organizations are transforming the way work gets done through practices like Agile, Lean, and DevOps. But as commonly implemented as these methods are, many transformations still fail, largely because the organization misses a critical step: transforming their culture and the way people communicate. *Agile Conversations* brings a practical, step-by-step guide to using the human power of conversation to build effective, high-performing teams to achieve truly Agile results. Consultants Douglas Squirrel and Jeffrey Fredrick show readers how to utilize the Five Conversations to help teams build trust, alleviate fear, answer the “whys,” define commitments, and hold everyone accountable. These five conversations give teams everything they need to reach peak performance, and they are exactly what’s missing from too many teams today. Stop focusing on processes and practices that leave your organization stuck with culture-less rituals. Instead, unleash the unique human power of conversation.

Every software developer and IT professional understands the crucial importance of effective debugging. Often, debugging consumes most of a developer’s workday, and mastering the required techniques and skills can take a lifetime. In *Effective Debugging*, Diomidis Spinellis helps experienced programmers accelerate their journey to mastery, by systematically categorizing, explaining, and illustrating the most useful debugging methods, strategies, techniques, and tools. Drawing on more than thirty-five years of experience, Spinellis expands your arsenal of debugging techniques, helping you choose the best approaches for each challenge. He presents vendor-neutral, example-rich advice on general principles, high-level strategies, concrete techniques, high-efficiency tools, creative tricks, and the behavioral traits associated with effective debugging. Spinellis’s 66 expert techniques address every facet of debugging and are illustrated with step-by-step instructions and actual code. He addresses the full spectrum of problems that can arise in modern software systems, especially problems caused by complex interactions among components and services running on hosts scattered around the planet. Whether you’re debugging

isolated runtime errors or catastrophic enterprise system failures, this guide will help you get the job done—more quickly, and with less pain. Key features include High-level strategies and methods for addressing diverse software failures Specific techniques to apply when programming, compiling, and running code Better ways to make the most of your debugger General-purpose skills and tools worth investing in Advanced ideas and techniques for escaping dead-ends and the maze of complexity Advice for making programs easier to debug Specialized approaches for debugging multithreaded, asynchronous, and embedded code Bug avoidance through improved software design, construction, and management Still making the same old mental mistakes over and over again? Isn't it time to debug your mental software? Using the simple tools in this book, you'll learn how to: 1) debug your mental software to eliminate the mental barriers to your success, 2) upgrad

With C and GNU Development Tools

Cloud Debugging and Profiling in Microsoft Azure

A Code of Conduct for Professional Programmers

Conversations About Running Production Systems at Scale

Debugging Teams

How Google Runs Production Systems

Transform Your Conversations, Transform Your Culture

Harness the full power of the Visual Studio IDE to take your coding skills to the next level by learning about IDE productivity practices and exclusive techniques Key Features Increase your productivity by leveraging Visual Studio 2019's improvements and features Explore powerful editing, code intelligence, and source code control features to increase productivity Delve into VS's powerful, untapped features such as custom project templates and extensions Book Description Visual Studio 2019 (VS 2019) and Visual Studio Code (VS Code) are powerful professional development tools that help you to develop applications for any platform with ease. Whether you want to create web, mobile, or desktop applications, Microsoft Visual Studio is your one-stop solution. This book demonstrates some of the most sophisticated capabilities of the tooling and shows you how to use the integrated development environment (IDE) more efficiently to be more productive. You'll begin by gradually building on concepts, starting with the basics. The introductory chapters cover shortcuts, snippets, and numerous optimization tricks, along with debugging techniques, source control integration, and other important IDE features that will help you make your time more productive. With that groundwork in place, more advanced concepts such as the inner workings of project and item

templates are covered. You will also learn how to write quality, secure code more efficiently as well as discover how certain Visual Studio features work 'under the hood'. By the end of this Visual Studio book, you'll have learned how to write more secure code faster than ever using your knowledge of the extensions and processes that make developing successful solutions more enjoyable and repeatable. What you will learn

Understand the similarities and differences between VS 2019 and VS Code
Get to grips with numerous keyboard shortcuts to improve efficiency
Discover IDE tips and tricks that make it easier to write code
Experiment with code snippets that make it easier to write repeating code patterns
Find out how to customize project and item templates with the help of hands-on exercises
Use Visual Studio extensions for ease and improved productivity
Delve into Visual Studio's behind the scene operations

Who this book is for
This book is for C# and .NET developers who want to become more efficient and take advantage of features they may not be aware of in the IDE. Those looking to increase their productivity and write quality code more quickly by fully utilizing the power of the Visual Studio IDE will also find this book useful.

The overwhelming majority of a software system's lifespan is spent in use, not in design or implementation. So, why does conventional wisdom insist that software engineers focus primarily on the design and development of large-scale computing systems? In this collection of essays and articles, key members of Google's Site Reliability Team explain how and why their commitment to the entire lifecycle has enabled the company to successfully build, deploy, monitor, and maintain some of the largest software systems in the world. You'll learn the principles and practices that enable Google engineers to make systems more scalable, reliable, and efficient—lessons directly applicable to your organization. This book is divided into four sections:

Introduction—Learn what site reliability engineering is and why it differs from conventional IT industry practices
Principles—Examine the patterns, behaviors, and areas of concern that influence the work of a site reliability engineer (SRE)
Practices—Understand the theory and practice of an SRE's day-to-day work: building and operating large distributed computing systems
Management—Explore Google's best practices for training, communication, and meetings that your organization can use

Ready to stand up and create positive change at work, but reluctant to speak up? True leadership doesn't always come from a position of power or authority. By teaching you skills and providing practical advice, this handbook shows you how to engage your coworkers and bosses and bring your ideas forward so that they are heard,

considered, and acted upon. Authors Carmen Medina and Lois Kelly—once rebels themselves—reveal ways to navigate your workplace, avoid common mistakes and traps, and overcome the fears that may be holding you back. You can achieve more success and less frustration, help your organization do better work, and—most important—find more meaning and joy in what you do.

Better Productivity Through Collaboration

Practical Remote Pair Programming

Debugging with Fiddler

Application Performance Management in the Cloud