Object Oriented Metrics In Practice Using Software Metrics To Characterize Evaluate And Improve The Design Of Object Oriented Systems

Object Design
Practical Object-oriented Design in Ruby
Maximizing ASP.NET
Software Engineering (Sie) 7E
Reusable Approaches for Object-Oriented Software Design
Metrics and Models in Software Quality Engineering
Theory and Practice
Measures of Complexity
Seamless Object-oriented Software Architecture
Object-oriented Technology for Database and Software Systems
Object-oriented Software Engineering
Advances in Software Engineering
Your Code as a Crime Scene
Software Testing and Quality Assurance
Design Patterns
AGILE PRIN PATTS PRACTS C#_1
Effectively Meeting Evolving Business Needs
Python 3 Object-oriented Programming
Software Engineering Metrics and Models
An Agile Primer
Object-Oriented Metrics in Practice
Design Patterns in Modern C++
Real World, Object-oriented Development
Object-oriented Metrics
Beautiful Architecture
Object-oriented Reengineering Patterns
Roles, Responsibilities, and Collaborations
Using Software Metrics to Characterize, Evaluate, and Improve the Design of Object-Oriented Systems
Object-Oriented Software Engineering Using UML, Patterns, and Java: Pearson New International Edition
A Rigorous and Practical Approach
ECOOP 2011--Object-Oriented Programming
APPLYING UML & PATTERNS 3RD EDITION
Software Metrics
A Metrics Suite for Object Oriented Design
Agile Principles, Patterns, and Practices in C#

Comprehension, Evaluation, and Evolution
Theory and Practice
Object-Oriented Project Management with UML
Refactoring Software, Architectures, and Projects in Crisis
Leading Thinkers Reveal the Hidden Beauty in Software Design

DOYLE PATRICIA

Object Design Addison-Wesley Professional
Object technology pioneer Wirfs-Brock teams with expert McKean to present a thoroughly updated, modern, and proven method for the design of software. The book is packed with practical design techniques that enable the practitioner to get the job done.
Practical Object-oriented Design in Ruby "O'Reilly Media, Inc."
Object-Oriented Analysis and Design for Information Systems clearly explains real object-oriented programming in practice. Expert author Raul Sidnei Wazlawick explains concepts such as object responsibility, visibility and the real need for delegation in detail. The object-oriented code generated by using these concepts in a systematic way is concise, organized and reusable. The patterns and solutions presented in this book are based in research and industrial applications. You will come away with clarity regarding processes and use cases and a clear understand of how to expand a use case. Wazlawick clearly explains clearly how to build meaningful sequence diagrams. Object-Oriented Analysis and Design for Information Systems illustrates how and why building a class model is not just placing classes into a diagram. You will learn the necessary organizational patterns so that your software architecture will be maintainable. Learn how to build better class models, which are more maintainable and understandable. Write use cases in a more efficient and standardized way, using more effective and less complex diagrams. Build true object-oriented code with division of responsibility and delegation.
Maximizing ASP.NET Addison-Wesley Professional
"The AntiPatterns authors have clearly been there and done that when it comes to managing software development efforts. I resonated with one insight after another, having witnessed too many wayward projects myself. The experience in this book is palpable." -John Vlissides, IBM Research "This book allows managers, architects, and developers to learn from the painful mistakes of others. The high-level AntiPatterns on software architecture are a particularly valuable contribution to software engineering. Highly recommended!" -Kyle Brown Author of The Design Patterns Smalltalk Companion "AntiPatterns continues the trend started in Design Patterns. The authors have discovered and named common problem situations resulting from poor management or architecture control, mistakes which most experienced practitioners will recognize. Should you find yourself with one of the AntiPatterns, they even provide some clues on how to get yourself out of the situation." -Gerard Meszaros, Chief Architect, Object Systems Group Are you headed into the software development mine field? Follow someone if you can, but if you're on your own-better get the map! AntiPatterns is the map. This book helps you navigate through today's dangerous software development projects. Just look at the statistics: * Nearly one-third of all software projects are cancelled. * Two-thirds of all software projects encounter cost overruns in excess of 200%. * Over 80% of all software projects are deemed failures. While patterns help you to identify and implement procedures, designs, and codes that work, AntiPatterns do the exact opposite; they let you zero-in on the development detonators, architectural tripwires, and personality booby traps that can spell doom for your project. Written by an all-star team of object-oriented systems developers, AntiPatterns identifies 40 of the most common AntiPatterns in the areas of software development, architecture, and project management. The authors then show you how to detect and defuse AntiPatterns as well as supply refactored solutions for each AntiPattern presented.
Software Engineering (Sie) 7E John Wiley & Sons
Object orientation has become a ?must know? subject for managers, researchers, and software practitioners interested in the design, evolution, reuse and management of efficient software components.The book contains technical papers reflecting both theoretical and practical contributions from researchers in the field of object-oriented (OO) databases and software engineering systems. The book identifies actual and potential areas of integration of OO and database technologies, current and future research directions in software methodologies, and reflections about the OO paradigm.In providing current research and relevant information about this promising and rapidly growing field of object-oriented databases and software engineering systems, this book is invaluable to research scientists, practitioners, and graduate students working in the areas of databases and software engineering.
Reusable Approaches for Object-Oriented Software Design John Wiley & Sons
Metrics for software development are usually employed ad-hoc and without clear directions for interpreting the numbers and acting on them. Almost every other engineering discipline has clear guidelines for measuring processes and products and making decisions based on quantified evidence. This practical book describes how to integrate processes and metrics to ensure easier and more effective enterprise software development. It crosses the divide between theory and practice and also discusses why essential processes so often fail to deliver quality industrial software. Enterprise Software Development introduces the techniques for building, applying and interpreting metrics for the workflows across the software development life cycle phases of inception, elaboration, construction and transition. It is a must read for software engineering practitioners (architects, application developers, designers and project managers), academics, and students and apprentices of software engineering.
Metrics and Models in Software Quality Engineering Course Technology Ptr

PART I: FUNDAMENTALS OF MEASUREMENT AND EXPERIMENTATION 1. Measurement: What Is It and Why Do It? 2. The Basics of Measurement 3. A Goal-Based Framework for Software Measurement 4. Empirical Investigation 5. Software Metrics Data Collection 6. Analyzing Software-Measurement Data PART II: SOFTWARE-ENGINEERING MEASUREMENT 7. Measuring Internal Product Attributes: Size 8. Measuring Internal Product Attributes: Structure 9. Measuring Internal Product Attributes 10. Software Reliability: Measurement and Prediction 11. Resource Measurement: Productivity, Teams, and Tools 12. Making Process Predictions PART III: MEASUREMENT AND MANAGEMENT 13. Planning a Measurement Program 14. Measurement in Practice 15. Empirical Research in Software Engineering APPENDIXES: A. Solutions to Selected Exercises / B. Metric Tools / C. Acronyms and Glossary / ANNOTATED BIBLIOGRAPHY / INDEX

Theory and Practice McGraw-Hill College

This work has been selected by scholars as being culturally important and is part of the knowledge base of civilization as we know it. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. To ensure a quality reading experience, this work has been proofread and republished using a format that seamlessly blends the original graphical elements with text in an easy-to-read typeface. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

Measures of Complexity Tata McGraw-Hill Education

""This is the single best book on software quality engineering and metrics that I've encountered."" --Capers Jones, from the Foreword"Metrics and Models in Software Quality Engineering, Second Edition," is the definitive book on this essential topic of software development. Comprehensive in scope with extensive industry examples, it shows how to measure software quality and use measurements to improve the software development process. Four major categories of quality metrics and models are addressed: quality management, software reliability and projection, complexity, and customer view. In addition, the book discusses the fundamentals of measurement theory, specific quality metrics and tools, and methods for applying metrics to the software development process.New chapters bring coverage of critical topics, including: In-process metrics for software testingMetrics for object-oriented software developmentAvailability metricsMethods for conducting in-process quality assessments and software project assessmentsDos and Don'ts of Software Process Improvement, by Patrick O'TooleUsing Function Point Metrics to Measure Software Process Improvement, by Capers Jones In addition to the excellent balance of theory, techniques, and examples, this book is highly instructive and practical, covering one of the most important topics in software development--quality engineering. 0201729156B08282002

Seamless Object-oriented Software Architecture Springer

Upon completion of an object-oriented design, you are faced with a troubling question: "Is it good, bad, or somewhere in between?" Seasoned experts often answer this question by subjecting the design to a subconscious list of guidelines based on their years of experience. Experienced developer Arthur J. Riel has captured this elusive, subconscious list, and in doing so, has provided a set of metrics that help determine the quality of object-oriented models. Object-Oriented Design Heuristics offers insight into object-oriented design improvement. The more than sixty guidelines presented in this book are language-independent and allow you to rate the integrity of a software design. The heuristics are not written as hard and fast rules; they are meant to serve as warning mechanisms which allow the flexibility of ignoring the heuristic as necessary. This tutorial-based approach, born out of the author's extensive experience developing software, teaching thousands of students, and critiquing designs in a variety of domains, allows you to apply the guidelines in a personalized manner. The heuristics cover important topics ranging from classes and objects (with emphasis on their relationships including association, uses, containment, and both single and multiple inheritance) to physical object-oriented design. You will gain an understanding of the synergy that exists between design heuristics and the popular concept of design patterns; heuristics can highlight a problem in one facet of a design while patterns can provide the solution. Programmers of all levels will find value in this book. The newcomer will discover a fast track to understanding the concepts of object-oriented programming. At the same time, experienced programmers seeking to strengthen their object-oriented development efforts will appreciate the insightful analysis. In short, with Object-Oriented Design Heuristics as your guide, you have the tools to become a better software developer. 020163385XB04062001

Object-oriented Technology for Database and Software Systems Packt Publishing Ltd

Almost all software projects are risky. The goal of every project manager is to somehow deal with the cost and schedule uncertainty while meeting your customer's needs. In Object-Oriented Project Management with UML, Murray Cantor describes an elegant, UML-based approach to managing object-oriented projects guaranteed to deliver high-quality software on time and within budget. Drawing on his experience managing major software projects at IBM and TASC, Cantor supplies you with: * Proven ways to reap the benefits of using UML tools to tame most project demons and deliver optimal OO systems * Tips on integrating object-based techniques with traditional methods for project planning, risk management, scheduling, time-phased budgeting, and more * Expert advice on how to handle all the important "people" issues that crop up during a development project * Real-life war stories that let you see firsthand what worked and what didn't on several major development projects * A full-length project example that walks you through every phase of a project told in terms of problems and solutions Visit the companion Web site at www.wiley.com/compbooks/cantor to find: * Sample project schedules, budgets, database templates for managing use cases, and a work-breakdown structure * A spreadsheet workbook for managing incremental development * A development tracking diagram Prior to joining TASC, Dr. Cantor was a development manager at IBM, where he oversaw the development of high-end graphics and multimedia systems.

Object-oriented Software Engineering Prentice Hall

With the award-winning book Agile Software Development: Principles, Patterns, and Practices, Robert C. Martin helped bring Agile principles to tens of thousands of Java and C++ programmers. Now .NET programmers have a definitive guide to agile methods with this completely updated volume from Robert C. Martin and Micah Martin, Agile Principles, Patterns, and Practices in C#. This book presents a series of case studies illustrating the fundamentals of Agile development and Agile

design, and moves quickly from UML models to real C# code. The introductory chapters lay out the basics of the agile movement, while the later chapters show proven techniques in action. The book includes many source code examples that are also available for download from the authors' Web site. Readers will come away from this book understanding Agile principles, and the fourteen practices of Extreme Programming Spiking, splitting, velocity, and planning iterations and releases Test-driven development, test-first design, and acceptance testing Refactoring with unit testing Pair programming Agile design and design smells The five types of UML diagrams and how to use them effectively Object-oriented package design and design patterns How to put all of it together for a real-world project Whether you are a C# programmer or a Visual Basic or Java programmer learning C#, a software development manager, or a business analyst, Agile Principles, Patterns, and Practices in C# is the first book you should read to understand agile software and how it applies to programming in the .NET Framework.

Advances in Software Engineering Addison-Wesley Professional

A superior primer on software testing and quality assurance, from integration to execution and automation This important new work fills the pressing need for a user-friendly text that aims to provide software engineers, software quality professionals, software developers, and students with the fundamental developments in testing theory and common testing practices. Software Testing and Quality Assurance: Theory and Practice equips readers with a solid understanding of: Practices that support the production of quality software Software testing techniques Life-cycle models for requirements, defects, test cases, and test results Process models for units, integration, system, and acceptance testing How to build test teams, including recruiting and retaining test engineers Quality Models, Capability Maturity Model, Testing Maturity Model, and Test Process Improvement Model Expertly balancing theory with practice, and complemented with an abundance of pedagogical tools, including test questions, examples, teaching suggestions, and chapter summaries, this book is a valuable, self-contained tool for professionals and an ideal introductory text for courses in software testing, quality assurance, and software engineering.

Your Code as a Crime Scene Pearson Education

The role of metrics and models in software development; Software metrics; Measurement and analysis; Small scale experiments, micro-models of effort, and programming techniques; Macro-models of productivity; Macro-models for effort estimation; Defect models; The future of software engineering metrics and models; References; Appendices; Index.

Software Testing and Quality Assurance Pearson Education

Object-Oriented Reengineering Patterns collects and distills successful techniques in planning a reengineering project, reverse-engineering, problem detection, migration strategies and software redesign. This book is made available under the Creative Commons Attribution-ShareAlike 3.0 license. You can either download the PDF for free, or you can buy a softcover copy from lulu.com. Additional material is available from the book's web page at http://scg.unibe.ch/oorp

Design Patterns Addison-Wesley Professional

Presents a novel metrics-based approach for detecting design problems in object-oriented software. Introduces an important suite of detection strategies for the identification of different well-known design flaws as well as some rarely mentioned ones.

AGILE PRIN PATTS PRACTS C#_1 Springer Science & Business Media

What are the ingredients of robust, elegant, flexible, and maintainable software architecture? Beautiful Architecture answers this question through a collection of intriguing essays from more than a dozen of today's leading software designers and architects. In each essay, contributors present a notable software architecture, and analyze what makes it innovative and ideal for its purpose. Some of the engineers in this book reveal how they developed a specific project, including decisions they faced and tradeoffs they made. Others take a step back to investigate how certain architectural aspects have influenced computing as a whole. With this book, you'll discover: How Facebook's architecture is the basis for a data-centric application ecosystem The effect of Xen's well-designed architecture on the way operating systems evolve How community processes within the KDE project help software architectures evolve from rough sketches to beautiful systems How creeping featurism has helped GNU Emacs gain unanticipated functionality The magic behind the Jikes RVM self-optimizable, self-hosting runtime Design choices and building blocks that made Tandem the choice platform in high-availability environments for over two decades Differences and similarities between object-oriented and functional architectural views How architectures can affect the software's evolution and the developers' engagement Go behind the scenes to learn what it takes to design elegant software architecture, and how it can shape the way you approach your own projects, with Beautiful Architecture.

Effectively Meeting Evolving Business Needs Lulu.com

This book covers the essential knowledge and skills needed by a student who is specializing in software engineering. Readers will learn principles of object orientation, software development, software modeling, software design, requirements analysis, and testing. The use of the Unified Modelling Language to develop software is taught in depth. Many concepts are illustrated using complete examples, with code written in Java.

Python 3 Object-oriented Programming Springer Science & Business Media

Product metrics are objective measures of the structure of software artefacts. Specifically, product metrics can be used in at least three ways: making system-level predictions, early identification of high-risk software components, and the construction of preventative design & programming guidelines. These uses allow an organization to get an early estimate of software quality and to take early action to reduce the number of faulty software components. The objective of this report is to provide a review of contemporary object-oriented metrics. It first describes how object-oriented metrics can be used in practice by software organizations and presents an overview of some of the most popular object-oriented metrics & those that have been studied most extensively. The next section describes current cognitive theories used in software engineering that justify the development of object-oriented metrics. This is followed by a further elaboration of the cognitive theory to explain the cognitive mechanisms for metric thresholds. The empirical evidence supporting the above theories is then reviewed. The report concludes with recommendations for the practical usage of object-oriented metrics, a discussion of the match between the empirical results & theory, and directions for future research.

Software Engineering Metrics and Models Springer Science & Business Media

Software legend Capers Jones reveals the tight links between software quality, ROI, and TCO, and

help you optimize all three • •Strong empirical evidence that high quality generates strongly positive ROI and reduced TCO. •Practical ways to prevent defects, and remove them in pre-test, test, and postrelease. •Easy checklists for assessing and improving practice, plus insights into the costs/benefits of intervention. •By renowned software consultant Capers Jones. In this book, world-renowned software management expert Capers Jones and software quality guru Jitendra Subramanyam help development leaders and practitioners quantify and optimize the economic impact of quality throughout the software lifecycle - and then choose the highest value interventions to improve it. The authors introduce powerful empirical and field data on the ability of inspection, static analysis, and test methods to reduce up to 95% of defects, and discuss the business value of improvements of this magnitude. The Economics of Software Quality is based on proven best quality practices in IT departments and at world-leading integrators, embedded software companies, and systems software groups. Jones and Curtis bring together crucial new information on: • •Identifying and fixing the root causes of short- and long-term software cost inefficiencies. •Predicting and measuring software defects and their quality impacts. •Assessing current practices and identifying the best interventions. •Calculating the ROI of quality during development and maintenance. •Comparing and choosing methods of defect prevention. •Selecting methods of defect removal, such as inspections and static analysis. •Understanding and evaluating more than 20 kinds of software testing. •Best practices for postrelease defect reporting and repair. •Recognizing 'hazardous' metrics and their problems

An Agile Primer Pearson Deutschland GmbH

Evolution of software has long been recognized as one of the most problematic and challenging areas in the field of software engineering, as evidenced by the high, often up to 60-80%, life-cycle costs attributed to this activity over the life of a software system. Studies of software evolution are central to the understanding and practice of software development. Yet it has received relatively little attention in the field of software engineering. This book focuses on topics aimed at giving a scientific insight into the aspect of software evolution and feedback. In summary, the book covers conceptual, phenomenological, empirical, technological and theoretical aspects of the field of software evolution - with contributions from the leading experts. This book delivers an up-to-date scientific understanding of what software evolution is, to show why it is inevitable for real world applications, and it demonstrates the role of feedback in software development and maintenance. The book also addresses some of the phenomenological and technological underpinnings and includes rules and guidelines for increased software evolvability and, in general, sustainability of the evolution process. Software Evolution and Feedback provides a long overdue, scientific focus on software evolution and the role of feedback in the software process, making this the indispensable guide for all software practitioners, researchers and managers in the software industry.