Software Reliability Techniques for Real-World Applications
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DESCRIPTION

SOFTWARE RELIABILITY TECHNIQUES FOR REAL-WORLD APPLICATIONS

Authoritative resource providing step-by-step guidance for producing reliable software to be tailored for specific projects

Software Reliability Techniques for Real-World Applications is a practical, up-to-date, go-to source that can be referenced repeatedly to efficiently prevent software defects, find and correct defects if they occur, and create a higher level of confidence in software products. From content development to software support and maintenance, the author creates a depiction of each phase in a project such as design and coding, operation and maintenance, management, product production, and concept development and describes the activities and products needed for each.

Software Reliability Techniques for Real-World Applications introduces clear ways to understand each process of software reliability and explains how it can be managed effectively and reliably. The book is supported by a plethora of detailed examples and systematic approaches, covering analogies between hardware and software reliability to ensure a clear understanding. Overall, this book helps readers create a higher level of confidence in software products.

In Software Reliability Techniques for Real-World Applications, readers will find specific information on:

• Defects, including where defects enter the project system, effects, detection, and causes of defects, and how to handle defects
• Project phases, including concept development and planning, requirements and interfaces, design and coding, and integration, verification, and validation

• Roadmap and practical guidelines, including at the start of a project, as a member of an organization, and how to handle troubled projects

• Techniques, including an introduction to techniques in general, plus techniques by organization (systems engineering, software, and reliability engineering)

Software Reliability Techniques for Real-World Applications is a practical text on software reliability, providing over sixty-five different techniques and step-by-step guidance for producing reliable software. It is an essential and complete resource on the subject for software developers, software maintainers, and producers of software.

ABOUT THE AUTHOR

ROGER K. YOUREE is a Systems Scientist at Instrumental Sciences, Inc. Dr. Youree received his Doctorate degree in Applied Mathematics from the University of Alabama in Huntsville, USA, and has more than thirty-five years of experience with military, NASA, and commercial programs, including responsibilities such as planning, cost estimates, and progress tracking. Dr. Youree has extensive expertise in reliability engineering, including RAM Plan development, requirements development, modeling for allocation, predictions, and system improvement.

SERIES

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