Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series)

From CRC Press

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press

An emerging topic in software engineering and data mining, specification mining tackles software maintenance and reliability issues that cost economies billions of dollars each year. The first unified reference on the subject, **Mining Software Specifications: Methodologies and Applications** describes recent approaches for mining specifications of software systems. Experts in the field illustrate how to apply state-of-the-art data mining and machine learning techniques to address software engineering concerns.

In the first set of chapters, the book introduces a number of studies on mining finite state machines that employ techniques, such as grammar inference, partial order mining, source code model checking, abstract interpretation, and more. The remaining chapters present research on mining temporal rules/patterns, covering techniques that include path-aware static program analyses, lightweight rule/pattern mining, statistical analysis, and other interesting approaches. Throughout the book, the authors discuss how to employ dynamic analysis, static analysis, and combinations of both to mine software specifications.

According to the US National Institute of Standards and Technology in 2002, software bugs have cost the US economy 59.5 billion dollars a year. This volume shows how specification mining can help find bugs and improve program understanding, thereby reducing unnecessary financial losses. The book encourages the industry adoption of specification mining techniques and the assimilation of these techniques in standard integrated development environments (IDEs).

⬇ **Download** Mining Software Specifications: Methodologies and ...pdf

 Read Online Mining Software Specifications: Methodologies an ...pdf

 Read Online Mining Software Specifications: Methodologies an ...pdf

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series)

From CRC Press

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press

An emerging topic in software engineering and data mining, specification mining tackles software maintenance and reliability issues that cost economies billions of dollars each year. The first unified reference on the subject, **Mining Software Specifications: Methodologies and Applications** describes recent approaches for mining specifications of software systems. Experts in the field illustrate how to apply state-of-the-art data mining and machine learning techniques to address software engineering concerns.

In the first set of chapters, the book introduces a number of studies on mining finite state machines that employ techniques, such as grammar inference, partial order mining, source code model checking, abstract interpretation, and more. The remaining chapters present research on mining temporal rules/patterns, covering techniques that include path-aware static program analyses, lightweight rule/pattern mining, statistical analysis, and other interesting approaches. Throughout the book, the authors discuss how to employ dynamic analysis, static analysis, and combinations of both to mine software specifications.

According to the US National Institute of Standards and Technology in 2002, software bugs have cost the US economy 59.5 billion dollars a year. This volume shows how specification mining can help find bugs and improve program understanding, thereby reducing unnecessary financial losses. The book encourages the industry adoption of specification mining techniques and the assimilation of these techniques in standard integrated development environments (IDEs).

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press Bibliography

- Sales Rank: #3584666 in Books
- Published on: 2011-05-24
- Original language: English
- Number of items: 1
- Dimensions: 9.75" h x 6.75" w x 1.00" l, 1.75 pounds
- Binding: Hardcover
- 460 pages

⬇ **Download** Mining Software Specifications: Methodologies and ...pdf

📄 **Read Online** Mining Software Specifications: Methodologies an ...pdf

📄 **Read Online** Mining Software Specifications: Methodologies an ...pdf

Download and Read Free Online Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press

Editorial Review

About the Author

David Lo is an assistant professor in the School of Information Systems at Singapore Management University. His research interests include specification mining, dynamic program analysis, automated debugging, code search, and pattern mining.

Siau-Cheng Khoo is an associate professor in the Department of Computer Science at the National University of Singapore. His research interests include specification mining, program analysis, program transformation, functional programming, domain-specific languages, and aspect-oriented programming.

Jiawei Han is a professor in the Department of Computer Science at the University of Illinois at Urbana-Champaign. He is editor-in-chief of the *ACM Transactions on Knowledge Discovery from Data* and co-editor of *Geographic Data Mining and Knowledge Discovery, Second Edition* (CRC Press, 2009) and *Next Generation of Data Mining* (CRC Press, 2009). His research interests include information network analysis, knowledge discovery, pattern discovery, data streams, and multidimensional analysis.

Chao Liu is a researcher in the Internet Service Research Center at Microsoft Research. His research interests include data mining for software engineering, statistical debugging, and machine learning and its use in web applications.

Users Review

From reader reviews:

Marvin Gamez:

In this 21st century, people become competitive in every way. By being competitive at this point, people have do something to make them survives, being in the middle of the actual crowded place and notice simply by surrounding. One thing that oftentimes many people have underestimated the item for a while is reading. Yeah, by reading a publication your ability to survive raise then having chance to remain than other is high. For yourself who want to start reading any book, we give you this kind of Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) book as basic and daily reading guide. Why, because this book is greater than just a book.

Maria Green:

Now a day people who Living in the era wherever everything reachable by match the internet and the resources included can be true or not call for people to be aware of each facts they get. How people have to be smart in having any information nowadays? Of course the answer is reading a book. Studying a book can help folks out of this uncertainty Information specially this Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) book because this book offers you rich data and knowledge. Of course the information in this book hundred % guarantees there

is no doubt in it as you know.

Antonio Nelson:

The ability that you get from Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) is the more deep you rooting the information that hide within the words the more you get serious about reading it. It does not mean that this book is hard to comprehend but Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) giving you buzz feeling of reading. The writer conveys their point in a number of way that can be understood by simply anyone who read that because the author of this reserve is well-known enough. That book also makes your current vocabulary increase well. Making it easy to understand then can go along, both in printed or e-book style are available. We advise you for having this particular Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) instantly.

Christie Rich:

This Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) is great book for you because the content that is certainly full of information for you who all always deal with world and still have to make decision every minute. This kind of book reveal it information accurately using great coordinate word or we can claim no rambling sentences included. So if you are read this hurriedly you can have whole data in it. Doesn't mean it only offers you straight forward sentences but tricky core information with attractive delivering sentences. Having Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) in your hand like having the world in your arm, data in it is not ridiculous a single. We can say that no book that offer you world inside ten or fifteen moment right but this e-book already do that. So , this is good reading book. Hey there Mr. and Mrs. busy do you still doubt that?

Download and Read Online Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press #YTXZM3CPFIQ

Read Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press for online ebook

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press books to read online.

Online Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press ebook PDF download

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press Doc

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press Mobipocket

Mining Software Specifications: Methodologies and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) From CRC Press EPub