Mining Software Engineering Data for Advanced Software Reuse

Software reuse is a key to improving the productivity and quality of software development. By reusing existing software components, developers can avoid having to reinvent the wheel and can focus on developing new and innovative features. However, finding and reusing software components can be a challenge, especially in large and complex software systems.

Mining Software Engineering Data for Software Reuse (Advanced Information and Knowledge Processing)

★★★★★ 5 out of 5

Language	: English
File size	: 25822 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 266 pages

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Data mining can be used to address the challenges of software reuse. Data mining is a process of extracting knowledge from data, and it can be used to identify patterns and trends in software engineering data. This knowledge can then be used to improve the efficiency and effectiveness of software reuse.

This book provides a comprehensive overview of the state-of-the-art in mining software engineering data for software reuse. It covers a wide range of topics, including:

- Data collection

- Preprocessing

- Feature extraction

- Classification

The book also discusses a number of applications of software reuse, such as:

- Defect prediction

- Effort estimation

- Architecture recovery

This book is an essential resource for anyone who is interested in mining software engineering data for software reuse. It provides a comprehensive overview of the state-of-the-art in this field, and it discusses a number of applications of software reuse.

Benefits of Mining Software Engineering Data for Software Reuse

There are a number of benefits to mining software engineering data for software reuse. These benefits include:

- Improved productivity

- Reduced costs

- Improved quality

- Reduced risk

Improved productivity: By reusing existing software components, developers can avoid having to reinvent the wheel. This can lead to significant savings in time and effort.

Reduced costs: Reusing software components can also lead to reduced costs. This is because it eliminates the need to develop and test new components.

Improved quality: Reusing software components can also lead to improved quality. This is because the components have already been tested and proven to be reliable.

Reduced risk: Reusing software components can also reduce risk. This is because the components have already been used in other projects and have been shown to be successful.

Applications of Mining Software Engineering Data for Software Reuse

There are a number of applications of mining software engineering data for software reuse. These applications include:

- Defect prediction

- Effort estimation

- Architecture recovery

Defect prediction: Data mining can be used to predict defects in software. This can help developers to identify and fix defects before they cause problems.

Effort estimation: Data mining can be used to estimate the effort required to develop software. This can help managers to make informed decisions about project schedules and budgets.

Architecture recovery: Data mining can be used to recover the architecture of software systems. This can help developers to understand the structure and organization of software systems.

Data mining is a powerful tool that can be used to improve the efficiency and effectiveness of software reuse. This book provides a comprehensive overview of the state-of-the-art in mining software engineering data for software reuse. It is an essential resource for anyone who is interested in this field.

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