

Code Clone Detection- Research, Tools, & Practices

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Code Clone Detection

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PREFACE

Context: Copying and pasting code to reuse software is a common software development practice. Software cloning, a method of duplicating code, is referred to as code cloning. Clones of software run the risk of spreading bugs and creating significant maintenance issues.

The **purpose** of this book is to present a thorough and systematic representation of software clones in general and software clone detection.

Results: Software clone-related literature has been roughly categorized into many groups. Different classifications resulted from the significance of semantic clone detection and model-based clone identification.

The **tools and approaches** for clone detection are evaluated empirically. Clone management is discussed along with its advantages and cross-cutting nature. It is reported that there have been nine different types of clones studied. There are 24 match detection approaches and 13 intermediate representations reported.

In **conclusion**, we urge a greater understanding of the potential advantages of software clone management and point out the need for the creation of semantic and model clone detection methods. There are recommendations made for additional studies.

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