EasyMerge - Clone Code Refactor

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ABSTRACT
Abstract goes here.

Categories and Subject Descriptors
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General Terms
Theory

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1. INTRODUCTION
In software development, it's very common seeing developers reuse code fragments by copying and pasting with or without minor adaptation. Moreover, for large scale projects, developers are often too lazy to browse existing source files so that they may rewrite similar or even identical functions which were already in the code base. As a result, software systems often contain sections of code that are very similar, called code clones.

Previous research shows that a significant fraction (between 7% and 23%) of the code in a typical software system has been cloned [1] [2]. Many code clones in code bases are unnecessary duplications. By detecting, categorizing, and removing code clones, we can produce easier to understand, cleaner, and more reusable code.

Clone detection has been an avid research topic in the field of software engineering for decades. Fortunately, several automated techniques for detecting code clones have already been proposed. However, how to deal with detected clones, e.g. how to distinguish necessary clones from unnecessary ones and how to refactor code to remove unnecessary clones still remain a big problem in not only commercial but also academic domain. As a result, in this paper, we try to classify code clones and build a recommendation system called EasyMerge to help developers merge unnecessary clones on top of current state-of-the-art clone detection approach.

2. BACKGROUND
3. CLONE CODE DETECTION
4. CLONE MERGING ALGORITHM
5. EXPERIMENTAL RESULTS
6. CONCLUSIONS
7. FUTURE WORK
8. ACKNOWLEDGMENTS
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9. REFERENCES
[1] B. Baker. On finding duplication and near-duplication in large software systems. *Proceedings of the 2nd Working Conference on Reverse Engineering*, pages 86–95, 1995.

[2] C. K. Roy and J. R. Cordy. An empirical study of function clones in open source software systems. *Proceedings of the 15th Working Conference on Reverse Engineering*, pages 81–90, 2008.