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PATTERNS OF PROPAGATING BUGS IN OPEN SOURCE SOFTWARES

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Abstract:

In software development, various debugging techniques are used to remove bugs which are found in source code. However in some situations, logical bugs still remain in the code after the debugging process. Furthermore, debuggers provides no mechanism to find out patterns of bugs that are generally ignored by these tools, particularly bugs that propagate between different revisions of the software's. In this article, an analysis has been carried out on information provided in concurrent versions system (CVS), open source repository and Eclipse bugzilla, a repository of bugs, in order to investigate the source code for identification of patterns of bugs that generally propagate in software revisions. An Eclipse project has been selected for source code extraction as per revision. For classification of code components, Weka tool has been used that offers a collection of machine learning algorithms for data mining.

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