Abstract

Most of the software companies need to deal with large number of software bugs each and every day. Software bugs are inevitable and fixing software bugs is an expensive task. The proposed system employs the combination of data reduction techniques that is feature selection algorithm (FS) and instance selection algorithm (IS) in order to shrink the bug data set and also to upgrade the accuracy of bug triage. Predictive model is used to determine the order of reduction techniques for a new bug data set, i.e., to choose between FS to IS or IS to FS. The aim of effective bug triaging software is to assign potentially skilled developers to new coming bug reports. To decrease the manual and time cost, text classification techniques are applied to accomplish automatic bug triage approach aims to precisely predict the developer to solve or fix the new bug report. The proposed system performance is verified using Mozilla bug data set. To exhibit the effectiveness, scales of data set is reduced by using data reduction technique in order to decrease the time and labor cost, improve the accuracy of bug triage with high-quality bug data in software development and maintenance.
References


Index Terms

Computer Science
Information Sciences

Keywords

Mining Software Repository, Data Management in Bug Repository, Bug Data Reduction, Feature Selection, Instance Selection, Bug Triage