

## Tri-Edge Software Bugs Effectively Data Reduction Techniques

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### ABSTRACT:

Software companies, more than 45 per cent of the cost of the cost of the underlying software flaw. Bug triage, developers have the right to decide to allocate to the out-break of a new important step in insects. To reduce the cost of labor time, automatic text classification methods applied to conduct triage bugs. In this paper, we are, how to reduce the size and improve the quality of the data, the data to solve the problem of ticks, bugs will trayej. We have the choice of reducing the quantity of data and sample selection criteria, as well as in combination with the dimensions and dimensional tic-term. Selection criteria for the selection of an example implementation, to ensure that we extract data from the system and history data to build predictive models for the construction of a new tick explode. We fully support the 600,000 Eclipse and Mozilla check the performance of data reduction experienced two major open source project. The results of the data we can effectively reduce the amount of data to reduce errors and improve the accuracy of triage shown.

The quality of our work and data processing technology to reduce the advantage of high data quality in the form of software development and management approach. Software error in dealing with the registration of the time-consuming step is to actually fix the bug, bug triage is just one of a developer. Traditional software development, new bug expert developers triaged manually is a triage humans. Daily bugs and a lack of skills, all insects, vermin expensive because of the costs, while reducing the large number of guiding triage and accuracy. Eclipse manual triage bugs, bug percent, while the average of 19.3 days, and the costs for the first time between the start of a bug triaging, has been a mistake. There are estimated to run to avoid the cost of expensive manual triage bugs, report bugs to the site triage bugs, text classification technology that works to develop the automated system. In this process, a bug report and related documents have been mapped to the label of the map as a developer documentation.

Then, convert the text classification problem triage and automatic text classification techniques, eg tick maturity, dealing with Naive Bayes. According to the classification of the text, a human Mariager his / her skill set by involving the new bug. Triage bugs are some of the ways to further increase the accuracy of text classification methods, for example, approach charts and for the study of tossing out the contribution. However, large-scale and low-quality data repositories are automatically bug triage techniques to prevent the spread of lice. Software errors in the data, such as free-form text data (the developer built), so, it is necessary to facilitate the production of the tick data, the application for action.

### INTRODUCTION:

In this paper, the data on labor costs to reduce the bug bug bug-finding and problem management process to improve the quality of treatment to reduce treatment data. Bug bug bug reports and data reduction treatment words, to build a small-scale and high-quality data sets by removing meaningless or non- story. In our work, we already have a bug with options to understand and mitigate the adverse effects of design options. Bug bug bug reports data at smaller than the original data, and thus cheaper, and provide information such as data on the original bug. The level of accuracy of the data set and bug treatment, in accordance with the data we need for the assessment of the bug. The results of the selection process and the fourth selection process we are experiencing a process to avoid bias, examined the four design factors. The problem is the combination of data reduction. In order to facilitate the selection of our knowledge, this is part of the selection and application examples domains. In, the data has not been studied for the reduction of error in the data is ready to be implemented. Two large open source projects, reduce data errors, errors wealth, estimated at Eclipse and Mozilla. An Eclipse integrated development environment (IDE) and many other languages, such as a software development environment, an extensible plug-in system;

Some of the classics, including internet applications suite, the Mozilla Firefox browser and Thunderbird email client products. December 31, 2011, 366,443 to 643,615 of the biggest mistakes of the Mozilla error has been registered more than 10 years will receive 12 reports have been registered. Our work, we have continued to errors in each project and Mozilla, Eclipse and Mozilla will take 300001600000 errors or defects to collect 300,000 1-300000 reports. In fact, Eclipse 281.180 298.785 bug reports and bug reports, the Mozilla bug report draws from the treasury collected some errors (for example, Eclipse Error 5315) or anonymous access is not allowed (eg, in the Mozilla bug 40020). Each bug reports, bug reports and we are investigating the details of the errors and collect treasure download websites. Thus, they only sucking bug reports, Which Hey fixed and duplicate (s were based status Excluded Items bug reports). Moreover, these bugs Repositories, Severl Developers only needs a Very Few bugs fixed. May Not Provide Information for developers Suffisiant Suc inactive developers Predikting correct. In our work, they were removed developers, Who needs a space X. Less bugs fixed.

## SYSTEM PREMELIRIES:

### Instance Selection:

The choice of samples and data processing techniques commonly used feature is the option. A specific embodiment of the data, sample set, the choice of a particular condition (ie, an error in the error data) feature option descriptions (ie bug data word) to a subset of a subset is intended to achieve. Our study design uses a combination of selection and feature selection.

### Data Reduction:

In our work, to save the labor cost of developers, the data reduction for bug triage has two goals.

- 1) reducing the data scale.
- 2) improving the accuracy of bug triage.

In contrast to modelling the textual content of bug reports in existing work, we aim to augment the data set to build a preprocessing approach, which can be applied before an existing bug triage approach. We explain the two goals of data reduction as follows.

## RELATED WORK:

In this section, we review existing work on modeling bug data, bug triage, and the quality of bug data with defect prediction.

### Modeling Bug Data:

SANDUSKY, and others associated with the improvement of the data to check. [45] to investigate the relationship between a network bug report an error set. Bug reports, as well as study the relationship between Hong Kong and others. [23] Mozilla, the developer of the project on the basis of improved data to build a social network interaction between the developers to consider. Social network developer and the developer community development plan is helpful to understand. Errors developers, and others, Juan mapping preferences. [57] of the open source repositories that identifies defects in a preferred developer. Developer support for software developers to support the priorities and actions to differ. Improved data, Zimmermann and others to check the quality. [64] Three open source project developers and questionnaire design. Based on the analysis of questionnaires, they also make a good bug reports and a trained guide to determine the classification will improve the quality of bug reports.

Delays in the processing of duplicate bug report bugs to undermine the quality of data errors. Duplicate bug reports, Wang and others to find. [54] Natural Language Processing design approach to respond to the implementation of information; Sun and others. [47] optimization of the extraction process to mimic the function of many of the proposed debugging tasks Worms, Breu, etc. to improve the quality of reports. [9] Considering the data in hand, searching for information on bug reports analyzed 600 bugs in the open source project. Bugs and requirements, based on a comparative analysis of the quality of Juan et al. [55] massive data requirements, database engineering, moving, lack of growth, open communication needs. In this paper, we focus on the quality of the data bug. Rather than (for example, [9], [64]) to study the features of the data quality of the current work or not (eg, [47], [54]), our focus on bug triage bug report reduces duplicate data quality and scale data can be used as both a preprocessing technique

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## Bug Triage:

A new bug bug triage to determine who should be able to fix the error, that is, the fix is to assign the appropriate developer. \_Cubrani\_ And Murphy [12] Bug discipline in hand to reduce the cost of the first to offer automatic bug triage problems. Developers are expected to apply to text classification technology. Anvik et al. [1] Bug detection equipment, including data preparation, and the typical setting, check. Anvik and Murphy [3] to create a bug triage recommended the development effort to reduce the spread of the above work. Jiang et al. [25] More than 37 percent of the user-reported bugs have been transferred to the bug triage. Look for a trick to reduce the allocation of thought on how to triage bugs. Trayej bugs, Juan et al to avoid low-quality bug reports. [56] combining unlabeled bug reported by a semi-supervised classification mark. Park et al. [40] an optimization problem bugfixing propose a bug triage approach and collaborative filtering to reduce the time changes. Once the bugs are triaged bug reports, there are many other issues: for example, the detection of the intensity [30], the other to realize the importance of planning to organize a bug in the bug report. Time Forecast worms [61] The model is expected to bug reports and bug fixing for the time value of the time value. Verabatsvel- to avoid a delay in the release of the software bug analysis [46], [63] Fixed bug reports in order to identify the fault

## Data Quality In Defect Prediction:

We solve the problem of sorting the data to reduce errors in our work. To our knowledge, no work, sorting errors, errors in data files have already been checked. In the same case, the prediction of errors in the data, some work has focused on the quality of the software defects. Taxonomy classification error classes, (such as source-code file, showing a software artifact, a group estimate, or prediction error in the classification of the problem binary class, rather. Module) errors in the information gathered by the characteristics of the structure. Software engineering, software metrics defect prediction is that kind of work. To improve the quality of the data Khoshgoftaar et al. [26] Gao et al. [21] investigated the data processing methods for the selection of the works of an unbalanced fault. Shivaji et al. [49] to trace an outline of the proposed algorithms to assess the noise characteristics of the multi-selection feature based on the classification error.

Errors in the future, in addition to a selection of works by Kim et al. [29] It is estimated that the noise and the noise of the measuring errors of the resistance to the current way of collecting data. Along the way, Vishnu and Bhattacharya [7] based on the data processing error in the quad-tree K- means clustering to help predict faults. In this book, apart from the above, we solve the problem of lack of data classification errors are found. Software Metrics can be seen as an extension of our work. In our work, we set the price of the software artifacts, software metrics to assess the current work while a price estimate for a software artifact.

## CONCLUSIONS:

Labor costs and the cost of software maintenance time for the costly step of the classification error. For example, the error associated with the selection of this article we selected features and improve the quality of the data to reduce the scope of the data files. Check out the wealth of data we reduce sorting errors, two large open source project, Eclipse and Mozilla bug encountered. Data processing technology and software development and data access to the benefits of our work to provide a high quality management to reduce the error. In the future work, we plan to deal with the results of the grading error on improving data reduction figure is the domain of high-quality data errors and are ready to set up the software. In order to reduce the future, we can set the properties of the data errors and the management of the link between efforts to pay for the plan.

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