i Title:

Kaiping Liu, Hee Beng Kuan Tan, Hee Beng Kuan Tan, Has This Bug Been Reported? Published in 2013 20th Working Conference on Reverse Engineering (WCRE)

ii Keywords

ii1 Vector Space Model (VSM) is a classic ranking model, in which each term in a document or query set constitutes a dimension of the vector. The relevance between a document and a query can be calculated as the distance between the two vectors.

ii2 Latent Semantic Indexing (LSI), uses singular value decomposition to uncover the latent semantic information among words and documents.

ii3 bug tracking system : It is a system that can be used by users and testers to report bugs in a system and the bug reports will be stored for future reference.

ii4 SVM

Support Vector Machines are supervised learning models with learning algorithms that analyze data for classification and regression analysis.

iii Brief Summaries

iii1 Motivation:

The already existing bug tracking systems have been analyzed and it has been found that close 36% of bugs could be duplicate or invalid. These duplicate bug reports can cause additional effort in bug fixing. Also the search functions provided by the existing bug tracking systems are using relatively simple ranking functions, producing not so useful results. Thus the need for a better searching mechanism to avoid duplicates in case the bug has been reported , so as to reduce bug management effort and cost of maintenance.

iii2 Data

The authors perform evaluations on more than 16,340 Eclipse and Mozilla bug reports. There are 6,340 such duplicate groups in total in Eclipse's database. Also , since Mozilla's database was pretty large, they randomly selected 10,000 such duplicate groups from it.

iii3 Related Work

This paper is based duplicate bug reports as well as on the ranking model that was made for bug report search for detecting similar or same bugs that have been reported.

There has been studies on detecting duplicate bug reports in the past , study by Runeson has been amongst the earliest. Also Hooimeijer and Weimer had developed a model to predict bug report quality.

iii4 Informative visualizations

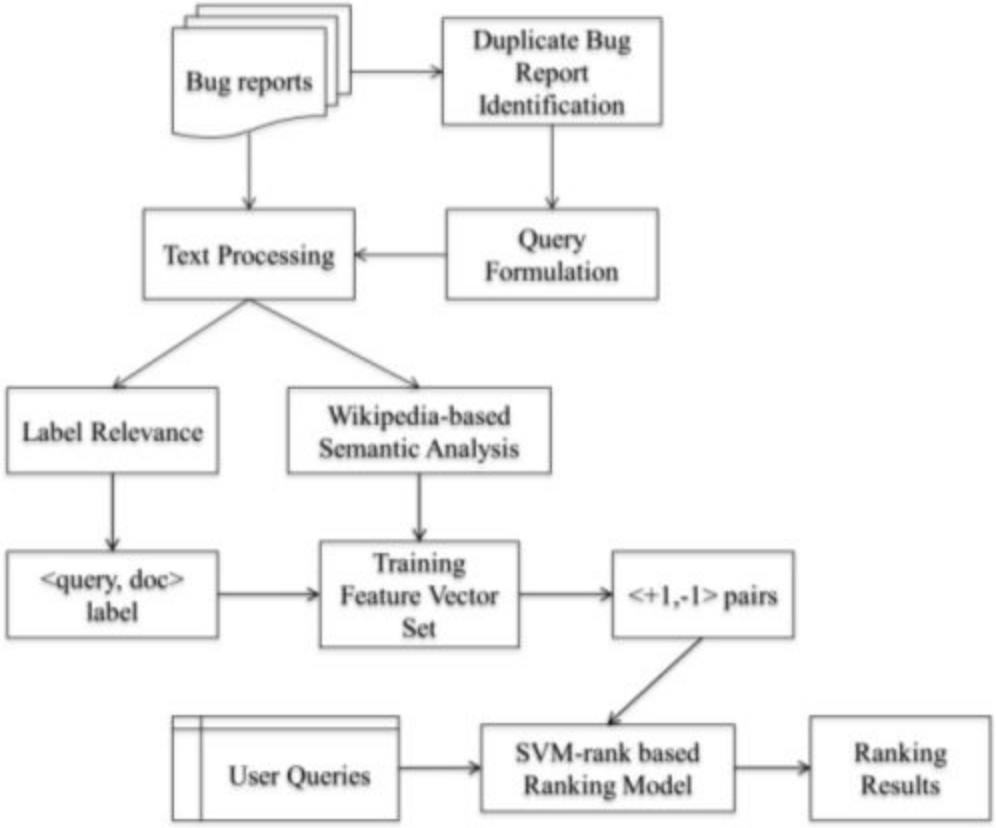

Fig. 2. Overview of the bug report search framework

The above figure picked directly from the paper is an overview of the flow and architecture of the proposed bug report search framework.

iv <u>Scope Of Improvement</u>

iv1: Explore additional features of bug reports to further improve the search quality of bug tracking systems.

iv2: Can conduct more experiments on large-scale projects, including industrial applications.

iv3: Improve the search quality in bug tracking systems with the aim of ranking the previously reported bugs higher so that duplicate reports can be prevented from submission.