Patent Search

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Abstract:

A systematic survey using machine learning techniques to analyse the efficacy of just-in-time software defect prediction systems is the proposed invention. The propo invention focuses on surveying the software defect prediction systems systematically. The invention focuses on analyzing the efficacy of just-in-time software defect p systems using algorithms of machine learning.

Complete Specification

Description:[0001] Background description includes information that may be useful in understanding the present invention. It is not an admission that any of th information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.
[0002] Software defect prediction system is the process of creating a predictive model that helps identify the defect-prone software modules before the testing ph begins. This is a mechanism that indicates possible defects in the newly written code or modified existing code without testing the code. This is one of the most assi activities of the Testing Phase of SDLC. The main benefit of these prediction models is that more testing resources can be allocated to fault-prone modules effective
[0003] A number of different types of just-in-time defect detection systems that are known in the prior art. For example, the following patents are provided for the supportive teachings and are all incorporated by reference.
[0004] A Systematic Survey of Just-In-Time Software Defect Prediction:- Recent years have experienced sustained focus in research on Software Defect Prediction that aims to predict the likelihood of software defects. Moreover, with the increased interest in continuous deployment, a variant of SDP called Just-in-Time Softwar Prediction (JIT-SDP) is focusing on predicting whether each incremental software change is defective. JIT-SDP is unique in that it consists of two interconnected data streams, one consisting of the arrivals of software changes stemming from design and implementation, and the other the (defective or clean) labels of software cha resulting from quality assurance processes. We present a systematic survey of 67 JIT-SDP studies with the objective to help researchers advance the state-of-the-art SDP and practitioners become familiar with recent progress. We summarize best practices in each phase of JIT-SDP workflow, carry out a meta-analysis of prior stud suggest future research directions. Our meta-analysis of JIT-SDP studies indicates, among other findings, that the predictive performance correlates with change de ratio, suggesting that JIT-SDP is most performant in projects that experience relatively high defect ratios. Future research directions for JIT-SDP include situating eac

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