

Design an Development of an Algorithm for Prioritizing the Test Cases Using Neural Network as Classifier

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Abstract : Test Case Prioritization (TCP) has gained wide spread acceptance as it often results in good quality software free from defects. Due to the increase in rate of faults in software traditional techniques for prioritization results in increased cost and time. Main challenge in TCP is difficulty in manually validate the priorities of different test cases due to large size of test suites and no more emphasis are made to make the TCP process automate. The objective of this paper is to detect the priorities of different test cases using an artificial neural network which helps to predict the correct priorities with the help of back propagation algorithm. In our proposed work one such method is implemented in which priorities are assigned to different test cases based on their frequency. After assigning the priorities ANN predicts whether correct priority is assigned to every test case or not otherwise it generates the interrupt when wrong priority is assigned. In order to classify the different priority test cases classifiers are used. Proposed algorithm is very effective as it reduces the complexity with robust efficiency and makes the process automated to prioritize the test cases.

Keywords : test case prioritization, classification, artificial neural networks, TF-IDF

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