Software Reliability Prediction using Neural Networks

Abstract

Predicting the Software reliability is a pertinent issue and it is a major concern of software developers and engineers in changing environment considerations. Software reliability models are developed to estimate the probability of failure free operation of the software for a long time. Many Software Reliability Growth Models (SRGM) were developed to give the latent number of faults in the software product. However none of these models performing to the expectations of the developers of the software. In this paper, A research is made using artificial neural network models to monitor the performance of the software that leads to predict the software reliability. The MLP model outperforms SVR model, and based on the results, these models can be considered to be a reasonable alternative for software quality prediction.

References

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Index Terms

Computer Science

Neural Networks

Keywords

Software Quality  Software Reliability  MLP Neural Network  Support Vector Regression  Back-propagation algorithm