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Neural Network Based Approach of Software Maintenance Prediction for Laboratory Information System

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Abstract : Software maintenance phase is started once a software project has been developed and delivered. After that, any modification to it corresponds to maintenance. Software maintenance involves modifications to keep a software project usable in a changed or a changing environment, to correct discovered faults, and modifications, and to improve performance or maintainability. Software maintenance and management of software maintenance are recognized as two most important and most expensive processes in a life of a software product. This research is basing the prediction of maintenance, on risks and time evaluation, and using them as data sets for working with neural networks. The aim of this paper is to provide support to project maintenance managers. They will be able to pass the issues planned for the next software-service-patch to the experts, for risk and working time evaluation, and afterward to put all data to neural networks in order to get software maintenance prediction. This process will lead to the more accurate prediction of the working hours needed for the software-service-patch, which will eventually lead to better planning of budget for the software maintenance projects.

Keywords : laboratory information system, maintenance engineering, neural networks, software maintenance, software maintenance costs
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