Abstract

This project reviews the use of Bays Networks (BNs) in software defects Prediction. The idea allows us to incorporate causal process factors. It does the combination of qualitative and quantitative software measures. It stops to play some well-known traditional software metrics methods limitations. Decision support tools for this have been built using causal models represented by Bays Networks (BNs), incorporate empirical data and judgment of experts. Previously, this required a custom BN for each development lifecycle phase. We described a more general idea that allows causal models to be applied to any lifecycle phases. The approach is evolved through collaborative projects and captures significant commercial input. For software projects within the range of the models, accuracy of defect predictions are very good. The main functions provided to the end-user is observations and can be entered using a questionnaire interface, where questions are concerned to Bays Network variables. The model predicts the defects likely to be left in software after testing. The model uses the results of statistical analysis on the Previous software projects. It can be combined with other defect prediction models to predict the number of residual defects of different categories. The Bayesian network structure is, here, a set of project domain conditional independence relation. BN learning structure which represents a domain. This domain can light on its underlying causal structure. This results in significantly improved accuracy for defects and reliability.
prediction type models.

References


Index Terms

Computer Science

Software Engineering

Keywords
| Software defects | BN (Bayesian network) | Defect Prediction |