A Survey of Bayesian Network Models for Decision Making System in Software Engineering

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Abstract

Defect prediction and assessment are the essential steps in large organizations and industries where the software complexity is growing exponentially. A large number of software metrics are discovered and used for metric prediction in the literature. Bayesian networks are applied to find the probabilistic relationships among the software metrics in different phases of software life cycle. Defects in a software project lead to minimize the quality which might be the impact on the overall defect correction. Traditional Bayesian networks are system dependable and their models are invariant towards the accurate computation. Bayesian network model is used to predict the defect correction at various levels of the software development. This model reveals the high potential software efforts and metrics required to minimize the overall cost of the organization for decision support.

References

1. Hearty, Peter; Fenton, Norman; Neil, Martin; Cates, Patrick,"Automated population of

2. Xiaoxu Wang, Xiaoxu Wang; Chaoying Wu, Chaoying Wu; Lin Ma, Lin Ma,"Software project schedule variance prediction using Bayesian Network",IEEE, 2010.


10. Fitzgerald, Brian; Musiał, Mariusz; Stol, Klaas-Jan,"Evidence-based decision making in lean software project management",Association for Computing Machinery — May 31, 2014.

Index Terms

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Keywords

Project metrics, probability estimation, Bayesian network.