Quantitative Project Assessment for Quality-Oriented Software Management

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Abstract

Many risks due to human factors are latent in a software development project. If suitable management can be performed to these risks and a software development process can be improved continuously, we will lead the project to improve in the productivity and quality of software product. In this paper, we analyze the process data collected from actual software development projects, and clarify the process factors which affect the quality of software product, by using multivariate analysis. Further, we also discuss a method of quantitative project evaluation based on a software reliability growth model, which helps us to give useful quantitative measures for determining project completion.


Index Terms

Computer Science
Software Engineering

Keywords

Principal Component Analysis
Multiple Regression Analysis
Structural Equation Modeling
Logistic Regression Analysis

Software Reliability Growth Model

Geometric Poisson Model