Investigating the Effects of Factors on Software Development

Abstract

The current methods to measure the reliability of software are usually focused on large server based products. In these approaches, the product reliability is traditionally measured in terms of catastrophic failures, as the raw data is generally collected manually through service organizations. This filters out many types of operational failures. In this paper we discuss some of the key factors in determining reliability of such software products. Paper then discuss systems being used for measuring reliability of commercial software. Qualitative/quantitative measurement of software reliability on following five factors.

S1=Installation requirements, S2= staff analysis skills, S3=Staff application knowledge, S4=staff tool skill and S5= staff team skill. In this paper four different cases are carried out by means of principle component analysis. First analysis with size as predominant factor, Second analysis with effort as predominant factor, third analysis with duration as predominant factor, finally including all the three associated in the list of seven factors with software reliability performance. The analysis of variables is to identify the dimension that are latent. This can be considered in the phenomena of performance correlation. That is to study the effects in the developed principal components analysis approach.

Reference

Index Terms
Computer Science Software Engineering

Key words
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software metrics