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Abstract

Software Effort estimation is the process of gauging the amount of effort required to complete the project. With the proliferation of software projects and the heterogeneity in there genre, there is a need for efficient software effort estimation techniques to enable the project managers to perform proper planning of the Software Life Cycle activates. In this article, a new hybrid

toolbox based on soft computing techniques for effort estimation is introduced. Particle swarm optimization and cluster analysis has been implemented to perform efficient estimation of effort values with learning ability. The main aim of the toolbox is to provide an efficient, flexible and user friendly way of performing the effort estimation task, by catering to the needs of both the technical and the nontechnical users. The toolbox also implements the COCOMO model to enable a comparative analysis of the proposed model. It was observed that the model when provided with enough training data gave better results when compared with the standard COCOMO values.

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Computer Science

Index Terms

Software Engineering

Key words

Constructive Cost Model (COCOMO)

K-means algorithm

Particle Swarm Optimization (PSO)

Software Effort Estimation

SEEPC: Software Effort Estimation–PSO–Clustering

