Software Architecture Optimization Using Swarm Intelligence Techniques

Authors : Arslan Ellahi, Syed Amjad Hussain, Fawaz Saleem Bokhari

Abstract : Optimization of software architecture can be done with respect to a quality attributes (QA). In this paper, there is an analysis of multiple research papers from different dimensions that have been used to classify those attributes. We have proposed a technique of swarm intelligence Meta heuristic ant colony optimization algorithm as a contribution to solve this critical optimization problem of software architecture. We have ranked quality attributes and run our algorithm on every QA, and then we will rank those on the basis of accuracy. At the end, we have selected the most accurate quality attributes. Ant colony algorithm is an effective algorithm and will perform best in optimizing the QA's and ranking them.

Keywords : complexity, rapid evolution, swarm intelligence, dimensions

Conference Title : ICCMIT 2018 : International Conference on Conceptual Modeling and Information Technologies

Conference Location : Sydney, Australia

Conference Dates : October 04-05, 2018