

Title: A hybridized approach for prioritizing software requirements based on k-means and evolutionary algorithms

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Abstract: One of the major challenges facing requirements prioritization techniques is accuracy. The issue here is lack of robust algorithms capable of avoiding a mismatch between ranked requirements and stakeholder's linguistic ratings. This problem has led many software developers in building systems that eventually fall short of user's requirements. In this chapter, we propose a new approach for prioritizing software requirements that reflect high correlations between the prioritized requirements and stakeholders' linguistic valuations. Specifically, we develop a hybridized algorithm which uses preference weights of requirements obtained from the stakeholder's linguistic ratings. Our approach was validated with a dataset known as RALIC which comprises of requirements with relative weights of stakeholders.