Title: A clustering based technique for large scale prioritization during requirements elicitation

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Abstract: We consider the prioritization problem in cases where the number of requirements to prioritize is large using a clustering technique. Clustering is a method used to find classes of data elements with respect to their attributes. KMeans, one of the most popular clustering algorithms, was adopted in this research. To utilize k-means algorithm for solving requirements prioritization problems, weights of attributes of requirement sets from relevant project stakeholders are required as input parameters. This paper showed that, the output of running k-means algorithm on requirement sets varies depending on the weights provided by relevant stakeholders. The proposed approach was validated using a requirement dataset known as RALIC. The results suggested that, a synthetic method with scrambled centroids is effective for prioritizing requirements using k-means clustering.