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Application of Text Mining in the Survey of Industrial Engineering Literature

Sara Abossedgh, Mohammad Saleh Owlia, Mohammad-Ali Vahdat and Mohammad-Reza Zare
Department of Industrial Engineering
Yazd University, Iran

Abstract

Text mining is a semi-automated process of driving high-quality information from a large amount of unstructured textual data. The aim of this study was to apply text mining techniques in order to classify the literature on Industrial Engineering subjects based on the information provided in the abstracts. Clustering, as a powerful method in data mining for obtaining useful information from text documents, was applied. The analysis of data was based on the papers published during the past 50 years (1961 to 2010) in authentic international journals. In the preparation stage, the stemming process was applied to reduce word declensions to a common root. A dictionary including the words in abstracts and frequency of each word in each abstract was made. Using WEKA software and identifying the clusters of industrial engineering literature, the trend of clusters from decade to decade was analyzed. The results show that Text Mining has a good potential to improve our knowledge in from different texts.

Keywords
Industrial engineering; Text mining; Literature; Clustering