Title	Unsupervised method of clustering and labeling of the online product based on reviews
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Published Journal Name	International Journal of Modeling, Simulation, and Scientific Computing
Type of Publication	Journal
Volume	12
Issue	02
Publisher	World Scientific Publishing Company
Publication Date	January 20, 2021
ISSN	2392-2192
DOI	10.1142/S1793962321500173
URL	https://www.worldscientific.com/doi/abs/10.1142/S1793962321500173
Other Related Info.	

Abstract

This paper presents an unsupervised approach to cluster reviews of products collected from Amazon and then generates its labels of each cluster. Instead of using a complete review, this paper splits a review into sentences and considers all sentences from the reviews as inputs for Clustering. Hierarchical Agglomerative Clustering (HAC) is used to cluster sentences. The approaches of cluster labeling are also unsupervised. For label- ing, three different methods have been used to find a limited number of essential words for each cluster. Extracted essential words are used to construct phrases. Constructed phrases are used as labels for each cluster. This paper compares the result of the labeling method with baseline labeling. In the result evaluation, all the labeling methods out- perform the baseline method. The aim of this research is cluster labeling that makes a set of labels to describe a cluster content and distinguishes the labels from other cluster labels.

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