

Dependency-based problem phrase extraction from user reviews of products

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Abstract

© Springer International Publishing Switzerland 2015. Capturing knowledge from customer reviews about products is an important object of interest for a company. This paper describes an approach to target extraction from user reviews of products. In contrast to other works, based on machine learning approaches, our system is defined by syntactic and semantic connections between possible targets and problem indicators. We present an approach where domain-specific targets are extracted using a problem phrase structure with dependency trees and semantic knowledge from a lexical database. The algorithm achieves an average F1-measure of 77%, evaluated on reviews from four different domains (reviews of electronic products, automobiles, home tools, and baby products). The F1-measure ranges from 76% for the reviews about baby products to 79% for automobile reviews.

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Keywords

Information extraction, Mining defects with products, Opinion mining, Text classification