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# A Case Study of Ontology-Based Sentiment Analysis for Fan Pages

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**Abstract :** Social media has become more and more important in our life. Many enterprises promote their services and products to fans via the social media. The positive or negative sentiment of feedbacks from fans is very important for enterprises to improve their products, services, and promotion activities. The purpose of this paper is to understand the sentiment of the fan's responses by analyzing the responses posted by fans on Facebook. The entity and aspect of fan's responses were analyzed based on a predefined ontology. The ontology for cell phone sentiment analysis consists of aspect categories on the top level as follows: overall, shape, hardware, brand, price, and service. Each category consists of several sub-categories. All aspects for a fan's response were found based on the ontology, and their corresponding sentimental terms were found using lexicon-based approach. The sentimental scores for aspects of fan responses were obtained by summarizing the sentimental terms in responses. The frequency of 'like' was also weighted in the sentimental score calculation. Three famous cell phone fan pages on Facebook were selected as demonstration cases to evaluate performances of the proposed methodology. Human judgment by several domain experts was also built for performance comparison. The performances of proposed approach were as good as those of human judgment on precision, recall and F1-measure.

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