

因果関係に着目した口コミ Web サイトからの評価表現抽出

Extracting Reputation Expressions from Web-based Review Sites by Using Causal Relationships

高野敦子、池奥渉太、北村泰彦

Keywords: sentiment analysis, causal relationship, web document

Recently, the role of reputation information in on-line discussion groups and review sites has received much attention, and that has spurred a great deal of research on sentiment analysis of web documents. It is well known that collecting sentiment expressions, which tend to be domain-dependent, is useful for sentiment analysis. However, it can be prohibitively costly to manually collect expressions for each domain. The purpose of this paper is to propose an automatic method to acquire sentiment expressions on a specific subject from web documents.

Our approach is based on a characteristic of sentiment expressions that often appear with their sentiment causes and both of them have cause-and-effect relationships. We develop a technique for recognizing cause-and-effect relationships between sentiment expressions and their sentiment causes using the results of dependency structure analysis. The proposed method uses this technique to extract sentiment causes starting from a small set of seed sentiment expressions, and extracts sentiment expressions from a set of sentiment causes.

To evaluate this work, we conducted experiments using discussion board messages about hotels and sweets. The results demonstrate that the proposed method effectively extract diversified sentiment expressions relevant to each domain and possesses adequate precision. Precision is also found to be better for compound sentiment expressions.