Mining Social Media for Competitive Intelligence: A Case Study of IBM

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Abstract

In Competitive Intelligence (CI) refers to the practice of monitoring competitive environment and collecting intelligence about market and competitors in aid of organization’s strategic decision making. It involves both the collection of relevant information from the environment and the transformation of such information into actionable intelligence (Kahaner 1997; Prescott 1995).

In the past, CI is manually collected from industry journals, newspaper and reports. Recently, web data such as online news articles and social media posts emerge as promising new sources for CI analysis. However, CI analysis of web documents still relies on the manual work of analysts to a large extent. Like in many other fields, as more and more online data become available for CI usage, the problem of information overload worsens.

Text mining poses an ideal solution to this problem for its capacity in discovering knowledge and patterns from vast amount of text data using data mining and natural language processing techniques. Despite there are some text mining-based CI studies; their major focus is still on the identification of competitors using name co-occurrence from a single news source. In addition, online news presents only limited knowledge of competitors and competition from industry analysts’ perspectives. Another problem is that most of these studies only take into account the threats from competitors in the outside environment while paying less attention to the strength and weakness of the focal company itself.

In addressing the problems stated above, we plan to conduct a CI case study on IBM using social media data and text mining. We combine consumer sentiments with syntactic features such as negation, comparative and superlative tense in identifying competitors from social media data. We also use sentiment analysis and IE to discover strength and weakness dynamics of the focal company. In evaluation experiments, we compare the performance of our proposed approach with the co-occurrence-based approach in terms of competitive sentences identification. We also compare the major competitor and the strength of weakness results general from our approach with our knowledge of IBM and its competition dynamics. Our proposed framework can help business executive make informed decisions by automatically scanning for focal firm’s competitors as well as its own strengths and weaknesses from social media. The outcome of this research can also extend our understanding of the connections between CI and social media.

References
