Briefly Noted

Opinion Mining and Sentiment Analysis

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Over the last decade or so there has been growing interest in research on computationally analyzing opinions, feelings, and subjective evaluation in text. This burgeoning body of work, variously called “sentiment analysis,” “opinion mining,” and “subjectivity analysis,” addresses such problems as distinguishing objective from subjective propositions, characterizing positive and negative evaluations, determining the sources of different opinions expressed in a document, and summarizing writers’ judgments over a large corpus of texts. Potential applications include Web mining for consumer and political opinion summarization, business and government intelligence analysis, and improving text analysis applications such as information retrieval, question answering, and text summarization.

In this well-written book, Pang and Lee survey the current state of the art in opinion mining and sentiment analysis, broadly construed, with the goal of fitting this diverse research area into a unified framework. After a brief introduction to the area (Chapter 1) and survey of application areas (Chapter 2), the authors present their view of the central challenges that unify this research area in Chapter 3, largely by contrasting it with “traditional,” “fact-based” text analysis, and summarizing writers’ judgments over a large corpus of texts. Potential applications include Web mining for consumer and political opinion summarization, business and government intelligence analysis, and improving text analysis applications such as information retrieval, question answering, and text summarization.

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A distinctive and valuable feature of the book is the inclusion of material on the relationship between subjective language and its social and economic impact (Chapter 6). This discussion helps to place the technical work in its larger context, pointing towards opportunities and risks in its application in various situations. Also particularly valuable is Chapter 7, on publicly available resources, which includes much useful information about available data sets, relevant competitive evaluations, and tutorials/bibliographies in the area. Although much of this information is likely to become outdated, the authors also maintain a companion Web site2 which presumably will feature updates to this resource list.

The book provides a useful resource for application developers as well as for researchers, though some readers might have benefited from a more extensive discussion of real-world applications and how various techniques can be used as components of larger systems.

Overall, this slim and entertaining volume is an excellent and timely survey of an exciting and growing research area within computational linguistics.—Shlomo Argamon, Illinois Institute of Technology

References

1 To be fair, there is a brief discussion in Chapter 1 of Banfield’s work (1982) and Quirk et al.’s notion of private states (1985) and their influence on the development of the notion of subjectivity, but it would have been nice to see a broader discussion relating the computational state of the art to linguistic theory.


Sentiment analysis (also known as opinion mining or emotion AI) refers to the use of natural language processing, text analysis, computational linguistics, and biometrics to systematically identify, extract, quantify, and study affective states and subjective information. Sentiment analysis is widely applied to voice of the customer materials such as reviews and survey responses, online and social media, and healthcare materials for applications that range from marketing to customer service to