Beyond sentiment analysis: a review of recent trends in text based sentiment analysis and emotion detection

ABSTRACT

Sentiment Analysis is probably one of the best-known area in text mining. However, in recent years, as big data rose in popularity more areas of text classification are being explored. Perhaps the next task to catch on is emotion detection, the task of identifying emotions. This is because emotions are the finer grained information which could be extracted from opinions. So besides writer sentiments, writer emotion is also a valuable data. Emotion detection can be done using text, facial expressions, verbal communications and brain waves; however, the focus of this review is on text-based sentiment analysis and emotion detection. The internet has provided an avenue for the public to express their opinions easily. These expressions not only contain positive or negative sentiments, it contains emotions as well. These emotions can help in social behaviour analysis, decision and policy makings for companies and the country. Emotion detection can further support other tasks such as opinion mining and early depression detection. This review provides a comprehensive analysis of the shift in recent trends from text sentiment analysis to emotion detection and the challenges in these tasks. We summarize some of the recent works in the last five years and look at the methods they used. We also look at the models of emotion classes that are generally referenced. The trend of text-based emotion detection has shifted from the early keyword-based comparisons to machine learning and deep learning algorithms that provide more flexibility to the task and better performance.