結合長短期記憶與注意力模型於情感分析論文摘要

蔡豪軒

東吳大學資訊管理學系

ttom525tw@gmail.com

黃日鉦

東吳大學資訊管理學系

jjhuang@scu.edu.tw

摘要

　　情感分析的目的為提取文本當中的情緒特徵，以供分析人員進行學術或商業的應用。然而，傳統的情感分析並未考慮到在文本的內容以及情緒特徵間存在不同的影響權重。因此，本研究提出一個結合了雙向長短期記憶以及注意力模型於情感分析的研究架構，來結合兩者資料作為神經網路的輸入變數，分別進行雙向長短期記憶模型進行訓練，並在雙向長短期記憶模型後加入注意力模型，使模型可以賦予重點單詞與情緒特徵更高的權重。實證結果發現，結合情緒特徵以及使用注意力模型的模型架構，可以較過去使用的雙向長短期記憶模型得到了更佳的情感分析結果。

關鍵詞：情感分析、情緒分析、長短期記憶、注意力模型、文字探勘。

Abstract

　　The purpose of the sentiment analysis is to extract emotional features in texts for decision-makers to process the applications of the academy or business. However, the conventional sentiment analysis does not consider the different weights between the content of the text and the emotional features. Therefore, this paper proposes a structure which combines bidirectional long-short term memory and attention model in sentiment analysis. The proposed model combines the two information as input data of neural network and trains the network via the bidirectional long-short term memory model. In addition, this paper add the attention model behind the bidirectional long-short term memory model to increase the weighs on specific emotion features. Finally, the proposed model is compared with other conventional models and show the better performance than the bidirectional long-short term memory model.

Keywords: Sentiment analysis, emotion analysis, long-short term memory, attention model, text mining.