

## Composite Kernels for Public Emotion Recognition from Twitter

**Authors :** Chien-Hung Chen, Yan-Chun Hsing, Yung-Chun Chang

**Abstract :** The Internet has grown into a powerful medium for information dispersion and social interaction that leads to a rapid growth of social media which allows users to easily post their emotions and perspectives regarding certain topics online. Our research aims at using natural language processing and text mining techniques to explore the public emotions expressed on Twitter by analyzing the sentiment behind tweets. In this paper, we propose a composite kernel method that integrates tree kernel with the linear kernel to simultaneously exploit both the tree representation and the distributed emotion keyword representation to analyze the syntactic and content information in tweets. The experiment results demonstrate that our method can effectively detect public emotion of tweets while outperforming the other compared methods.

**Keywords :** emotion recognition, natural language processing, composite kernel, sentiment analysis, text mining

**Conference Title :** ICCLNLP 2018 : International Conference on Computational Linguistics and Natural Language Processing

**Conference Location :** Osaka, Japan

**Conference Dates :** October 11-12, 2018