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Emotion Classification Using Recurrent Neural Network and Scalable Pattern Mining

Authors : Jaishree Ranganathan, MuthuPriya Shanmugakani Velsamy, Shamika Kulkarni, Angelina Tzacheva

Abstract : Emotions play an important role in everyday life. An-alyzing these emotions or feelings from social media platforms like Twitter, Facebook, blogs, and forums based on user comments and reviews plays an important role in various factors. Some of them include brand monitoring, marketing strategies, reputation, and competitor analysis. The opinions or sentiments mined from such data helps understand the current state of the user. It does not directly provide intuitive insights on what actions to be taken to benefit the end user or business. Actionable Pattern Mining method provides suggestions or actionable recommendations on what changes or actions need to be taken in order to benefit the end user. In this paper, we propose automatic classification of emotions in Twitter data using Recurrent Neural Network - Gated Recurrent Unit. We achieve training accuracy of 87.58% and validation accuracy of 86.16%. Also, we extract action rules with respect to the user emotion that helps to provide actionable suggestion.

Keywords : emotion mining, twitter, recurrent neural network, gated recurrent unit, actionable pattern mining
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