Music and Lyrics:
Can Lyrics Improve Emotion Estimation for Music?

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Abstract

Do lyrics hold the key to improving the performance of emotion-based music information retrieval (EMIR)? While mainstream EMIR research focuses on analyzing a song's melody, this study aims to explore the influence of lyrics vs. melody. We conducted a user study to gather subjects' emotion ratings on lyrics and melody, and applied statistical analysis to show how each contributes to a song's overall emotion level in terms of its Valance-Arousal (V-A). Two datasets are prepared based on the overall concordance from 10 pre-testers, and each dataset consists of one carefully chosen song for each V-A quadrant. A total of 60 subjects participated in the user study. For each song, a subject is requested to rate the emotion levels of all three forms, lyrics only, melody only, and both, of the song in random order. Our results show that lyrics are not only a valid measure for emotion estimation of a song, but they also provide supplementary information that can improve a melody-centric EMIR system. In addition, the data suggest that the correlation between lyrics and melody depends on the V-A quadrant in which the song resides.