

عنوان مقاله:

A Database for Automatic Persian Speech Emotion Recognition: Collection, Processing and Evaluation

محل انتشار:

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خلاصه مقاله:

Recent developments in robotics automation have motivated researchers to improve the efficiency of interactive systems by making a natural man-machine interaction. Since speech is the most popular method of communication, recognizing human emotions from speech signal becomes a challenging research topic known as Speech Emotion Recognition (SER). In this study, we propose a Persian emotional speech corpus collected from emotional sentences of drama radio programs. Moreover, we propose a new automatic speech emotion recognition system which is used both for spectral and prosodic feature simultaneously. We compare the proposed database with the public and widely used Berlin database. The proposed SER system is developed for females and males separately. Then, irrelevant features are removed using Fisher Discriminant Ratio (FDR) filtering feature selection technique. Theselected features are further reduced in dimensions using Linear Discriminant Analysis (LDA) embedding feature reduction scheme. Finally, the samples are classified by a LDA classifier. The overall recognition rate of 55.74% and 47.28% is achieved on proposed database for females and males, respectively. Also, the average recognition rate of 78.64% and 73.40% are obtained for Berlin database for females and males, respectively.

کلمات کلیدی:

Persian Emotional Speech Database, PDREC, Speech Emotion Recognition

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