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N.B.: This demonstraton paper will be presented during the coffee-break in room Révész (202)

A PROGRAM FOR TEACHING OF COMMUNICATION OF EMOTION IN MUSIC PERFORMANCE

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Background

We developed prototype software in the context of a research project on Feedback-learning of Musical Expressivity (Feel-ME). The software can be used by music students to analyze their achievement in communication of emotions in music performance. The prototype contains an implementation of a communication model developed in previous research. It will be used for gathering data in a field study that explores the effect of a novel teaching strategy.

Aims

Our goal was to develop computer software that could provide music students with Cognitive Feedback (i.e. feedback that allows the student to compare a model of his or her utilization of acoustic cues in the performance with an optimal model). The software should be easy to use, even for music students without much experience of using computers. The aim of this paper is to demonstrate the software with appropriate examples.

Method

During a recording session, the music student is asked to play the same melody with different emotional expressions. The software automatically extracts the acoustical cue values from the audio recordings. The relative importance of each cue and the consistency of cue utilization in the student's emotion portrayals are estimated using multiple regression analysis. Comparison with stored listener models (which simulate judgments of the perceived emotional expression) provides detailed information about how the student's utilization of cues can be improved.

Results

The graphical user interface represents a visualization of the circular process of (a) recording, (b) analyzing cues, and (c) receiving feedback. Recording sessions are organized into projects (representing a melody, musical style or composer). The sessions are stored in order to enable the student to monitor his/her progress. The program can be used by students, music teachers, and researchers. Each of these user groups has different permissions in the program. Students, for example, have only access to their own data, while music teachers are allowed to view the data of all users. The program can provide both cognitive feedback and more limited outcome feedback, which will enable us to measure the importance of cognitive feedback.

Conclusions

A previous study indicated a positive effect of cognitive feedback on learning to communicate emotions in music performance. The present prototype will be used for further explorations of computer-assisted learning of expressive skills.