

PROJECT / Voice Coach for Reduced Stress

VOCE

Main Objective:

VOCE shall develop methods and algorithms that enable the online classification of stress from live speech with the goal of providing feedback cues to the speaker in real-time to improve his communication skills. The work will focus on detecting and classifying stress in speech by leveraging advanced signal processing and machine learning techniques, complemented with psychological analysis of different aspects of stress perception.

Specifically, the tasks shall produce the following deliverables:

1) a large database of spontaneous speech samples multiply tagged for being used in the development of automatic stress recognition methods; 2) speech feature extraction algorithms that are capable of real-time performance, as well as the tagging of the samples in the database.; 3) a reduced set of features relevant for stress classification, a classification algorithm that can classify stress levels in real-time, a benchmark evaluation of the various machine learning approaches to automatic stress classification, using similar evaluation methodology and sample data set; 4) an application that integrates the results of the previous tasks and evaluate its accuracy and response times, both in laboratory settings with elicited emotions and in real-life trials.

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