عنوان مقاله:

Diagnosing Types of Stuttering, using Support Vector Machine, FFT and MFCC in the Persian Language

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خلاصه مقاله:

Stuttering, as the most common speech disorder, is one of the best issues in the field of interdisciplinary research. Several methods have been used to identify and classify stuttering, such as artificial neural network (ANN), hidden Markov model (HMM) and support vector machine (SVM). Here we have used the SVM, because the use of ANN or HMM requires some data for training and testing, but our proposed method is much faster and classifies data with better accuracy. Our proposed system consists of five steps include: 1. Receiving sample signal,2. Pre-processing sample signal, 3. compute the required features, 4. Feature extraction, and 5. Category sample to the appropriate class. The purpose of this paper is to create a support vector machine which diagnose the type of a stutter in people whom speak Persian. The main idea is to diagnose the type of the stutter hence proper treatment could be done and their stutter could be cured. Another challenge in this paper is finding useful features in this diagnosis. It means by finding the different features and variables such as: gender, age and other catachrestic, diagnosis of the type of stutters could be accurate and reliable. To fulfill this purpose, different characteristic on received signals were studied by Max FFT method and the result showed a %59accuracy and the signals could be categorized by the type of stutters

کلمات کلیدی:

Stuttering, Types of stuttering, artificial neural networks, diagnosis of stuttering, support vector machine