Abstract

Decision support system in voice disorder classification has developed more and more momentum now days because of complication in routine methods. Neurological disorder creates speech problems. Therefore, decision support system can serve as an important mean to detect voice disorders.

In this research work, normal & vocal cord cancer voice samples are used & a system is designed to classify vocal cord cancer speech from Normal speech. Vocal cord carcinoma is defined as a malignant tumor in the vocal fold. It is a form of laryngeal cancer, also called as glottis cancer. Pre-processed diseased and normal speech signals are used for spectral analysis to detect disease. Autocorrelation of speech signals is calculated to see the difference between normal and vocal cord cancer speech signal. Two sets of twenty five features are calculated and three neural networks like MLP, GFF, Modular and SVM are used for classification. Feature sets, Networks with highest classification accuracy were found. It is observed that the accuracy of this disease classification is 100%. 

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References


Index Terms

Computer Science  Signal Processing
Key words

Vocal cord speech signals; Spectral analysis; Feature extraction, SVM; MLP; Feed forward; Modular Networks.