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Detection of Autistic Children's Voice Based on Artificial Neural Network

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Abstract : In this research we have been developed an automatic investigation to classify normal children voice or autistic by using modern computation technology that is computation based on artificial neural network. The superiority of this computation technology is its capability on processing and saving data. In this research, digital voice features are gotten from the coefficient of linear-predictive coding with auto-correlation method and have been transformed in frequency domain using fast fourier transform, which used as input of artificial neural network in back-propagation method so that will make the difference between normal children and autistic automatically. The result of back-propagation method shows that successful classification capability for normal children voice experiment data is 100% whereas, for autistic children voice experiment data is 100%. The success rate using back-propagation classification system for the entire test data is 100%.

Keywords : autism, artificial neural network, backpropagation, linier predictive coding, fast fourier transform
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