

Decision Support Tool to Recognize Speech Disorder of Children in Sri Lanka

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Abstract

This research focuses on the development and management of an intelligent system for voice disorders and has addressed the important issues such as diagnosing and treatment procedures of voice disorders. The diagnostic methods are currently limited to manual procedures; and therefore, some form of IT-assisted tool with intelligent decision making would be a valuable addition to the treatment process. Furthermore, the ability of the tool to monitor the progress of the treatment plans would further enhance the value addition.

The physical properties of a voice signal can be analyzed using the digital signal processing analysis such as pitch frequencies, formant frequencies, and Mel frequencies. These physical properties are varying with age, cultural background, geographical location, and language. Therefore, these parameters have to be fixed when performing an experiment. In order to fix these parameters, the students' samples for the research can be selected from a single population. The members of the sample will comprise students whose age is less than 7 and greater than 5 years. In addition to it, pre-determined sample words called phonetic balance can be chosen for the voice recordings.

Declaration

We declare that this thesis is our own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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