

Feature based classification for classroom speech intelligibility prediction

Abstract

Education is one of the most important aspects in human life. Nowadays, a quality education not only rely on the teaching itself, but also the environment. One of the important aspects in providing an educative environment is the acoustic quality of the teaching facilities. In this paper, a signal processing based classroom speech intelligibility prediction will be discussed. There are four main stages involved in this research, which were measurement, preprocessing, feature extraction and classification. Two types of audio features were used in this research and the classification results were compared. It was concluded that Elman classifiers trained with zero-crossing rate features tend to produce better classification accuracy compared to the spectral roll off.

Keywords — Audio feature extraction, classroom speech intelligibility, elman, prediction, STI