

ABSTRACT

Fuzzy Hidden Markov Models for Indoensian Speech Classification

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Indonesia has a lot of tribe, so that there are a lot of dialects. Speech classification is difficult if the database uses speech signals from various people who have different characteristics because of gender and dialect. The different characteristics will influence requency, intonation, amplitude, and period of the speech. make the system be trained for the various templates reference of speech signal. Therefore, this study has been developed for Indonesian speech classification This study designs the solution of the different characteristics for Indonesian speech classification. The solution combines Fuzzy on Hidden Markov Models. The new design of fuzzy Hidden Markov Models will be proposed in this study. The models will consist of Fuzzy C-Means Clustering which will be designed to substitute the vector quantization process and a new forward and backward method to handle the membership degree of data. The result shows FHMM is better than HMM and the improvement was 3.33 %.

Keywords: Fuzzy, Hidden Markov Models, Indonesian, Speech, Classification