



SRI RAAJA RAAJAN COLLEGE OF ENGINEERING AND TECHNOLOGY

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INTERNATIONAL CONFERENCE

On

RECENT TRENDS IN ARTIFICIAL INTELLIGENCE, ROBOTICS & CYBER SECURITY

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Department of Computer Science and Engineering

***An Automatic Speech Recognition System for Tamil Sign Language Synthesis
using the Mel Frequency Cepstral Co efficient and Hidden Markov Model***

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Abstract: Sign language is a root level communication language for deaf people or those who are hearing impaired, so they found difficulty to communicate with the outer world. Hearing impaired people also had less reading skills, than the average educated person lack basic communication with others. To reduce this communication gap and made them available more information, an Automatic Speech Recognition (ASR) system is proposed. This proposed system synthesizes signs from sign text to Tamil Sign Language. Mel Frequency Cepstral Co efficient (MFCC) and Hidden Markov Model is used to develop the ASR. The developed system provided better promising results for Tamil Sign Language Synthesis.

Keywords: Sign Language; Synthesis; Mel Frequency; Hidden Markov Model; Speech Recognition

A review of Machine Learning for Big data processing

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Abstract

There is no doubt that big data are now rapidly expanding in all science and engineering domains. While the potential of these massive data is undoubtedly significant, fully making sense of them requires new ways of thinking and novel learning techniques to address the various challenges. In this paper, we present a literature survey of the latest advances in researches on machine learning for big data processing. First, we review the machine learning techniques and highlight some promising learning methods in recent studies, such as representation learning, deep learning, distributed and parallel learning, transfer learning, active learning, and kernel-based learning. Next, we focus on the analysis and discussions about the challenges and possible solutions of machine learning for big data. Following that, we investigate the close connections of machine learning with signal processing techniques for big data processing. Finally, we outline several open issues and research trends.

Keywords: *Machine learning, Big data, Data mining, Signal processing techniques*

Segmentation of Tumor in MRI using FCM Algorithm

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Abstract

The paper focuses on how a brain image is being segmented to diagnose the brain tumor by using spatial fuzzy clustering algorithm. *The* process of segmentation plays a vital role in medical application because segmentation is the first step in image analysis. In order to identify any variation, the segmentation in medical images should be clear. Nowadays, segmentation of brain tumor is a difficult task in medical images. The segmentation process may cause error while diagnosing MR images due to the artifacts and noises exist in it. This may leads to misclassify the normal tissue as abnormal tissue. The proposed method is to segment normal tissues such as White Matter, Gray Matter, Cerebrospinal fluid and abnormal tissue like tumor part from MR images automatically. This paper presents a fuzzy -means (FCM) clustering algorithms for the segmentation of brain MR images. In this approach a method trade-off weighted fuzzy factor is used to segment the tumor region from the MRI images is used to increase the performance of segmentation results. Finally experimental results of the proposed framework gives better efficiency and provides higher accuracy than other compared existing approaches.

Keyword: Brain Segmentation, Fuzzy, Weighting factor, Tumor tissues, MRI images