Title of Seminar: Artificial Intelligent System for Automatic Depression Level Analysis Through Visual and Vocal Expressions**.**

Area of Seminar: Artificial Intelligence

Name of Guide: Dr. Sanjit Kumar Dash

Name of Student: Aditya Prasad Tripathy

Abstract:

A human being's cognitive system can be simulated by artificial intelligent systems. Machines and robots equipped with cognitive capability can automatically recognize a human's mental state through their gestures and facial expressions. In this paper, an artificial intelligent system is proposed to monitor depression. It can predict the scales of Beck depression inventory II (BDI-II) from vocal and visual expressions. Firstly, different visual features were extracted from facial expression images. Deep learning method was utilized to extract key visual features from the facial expression frames. Secondly, spectral low-level descriptors and Mel-frequency cepstral coefficients features were extracted from short audio segments and the vocal expressions were captured. Thirdly, a feature dynamic history histogram (FDHH) was proposed to capture the temporal movement on the feature space. Finally, these FDHH and audio features were fused using regression techniques for the prediction of the BDI-II scales. The proposed method had been tested on the public Audio/Visual Emotion Challenges 2014 dataset as it is tuned to be more focused on the study of depression. The results outperformed all the other existing methods on the same dataset.

Dr. Sanjit Kumar Dash

Signature of Guide

Aditya Prasad Tripathy

Signature of Student

Reg. No: 1701106508