conferenceseries.com

6th Global Summit on

Artificial Intelligence and Neural Networks

October 15-16, 2018   Helsinki, Finland

System architecture for emotion recognition based on linear parameters of EEG signals

Maya Ingle
Devi Ahilya Vishwavidyalaya, India

Ongoing brain activity can be recorded as Electroencephalograph (EEG) to determine the associations between emotional states and brain activity. EEG based emotion recognition has caught its significance in affective computing domain. In this context, we propose subject independent system architecture, Hjorth Parameters based Multilayer Perceptron neural network (HP-MLP) for EEG based emotion recognition. In this architecture, we concentrate on a feature extraction technique using three Hjorth parameters activity, mobility and complexity of EEG signals. The EEG dataset containing EEG signals of 16 subjects for happy, sad and fear emotion has been constructed. HP-MLP has been configured based on feature vectors drawn from three Hjorth parameters. Using HP-MLP, emotions are classified with the highest accuracy as 70.8% for activity, 94.2% for mobility and 80.6% for complexity parameter for training dataset and 70% for testing dataset.

Biography

Maya Ingle is currently the Professor/Senior System Analyst at School of Computer Science and Information Technology at Devi Ahilya University, India. She also serves as a Visiting Professor at Indian Institute of Technology Indore, India. She has 31 years of teaching and research experience. Her research areas include emotion based computing, statistical natural language processing, theoretical computing and algorithms and image and pattern recognition. She has published 200+ papers in journals and conferences.

mayaingle22@gmail.com

Notes: