Abstract:

Muscle diseases occur in all age groups and can cause serious physical disability. The effect of such diseases is severe when children and young adults are affected. The needs of these patients are numerous and complicated and are frequently inadequately met. Some muscle diseases respond well to medical treatment, whereas many physical disabilities can be improved or prevented.

This paper presents the implement of The Locally Recurrent Neural Networks (LRNNs) to detect the muscles diseases based on real measurement of electromyography (EMG) signals. The LRNNs training achieved by using Levenberg-Marquardt back propagation (LMBP) to get high accuracy through the identification and recognition process. Many processing applied with EMG signal through LRNNs before recognition the diseases. Finally design the simulation of this work by using Graphical User Interface (GUI) through MATLAB. Satisfactory results are obtained with the case study of real implement on human arm muscles.