

Methods and approaches on emotions recognition in neurodegenerative disorders: a review

Abstract

Emotion is one of the key factors for estimating the human behavior through verbal or non-verbal communication. Development of emotion recognition system gains a major attention in several applications, mainly in brain computer interface (BCI). Nevertheless, most of the researchers are focused on developing intelligent emotion recognition systems based on healthy subjects and no works reported on neurologic disorders (NDs). Recent years, there has been growing interest in the field of emotion recognition in NDs for improving their life style to enhance their better living. This work, presents the extensive literature study on emotion processing deficits in four common neurologic disorders (Alzheimer Disease (AD), Parkinson's Disease (PD), Huntington's disease (HD) and Stroke) through different communication channels (facial, Prosodic, lexical). Facial expression based emotion recognition has been widely used by many researchers to identify the emotional impairment from the neurological disorder people. Results of this study indicates that, most of the NDs are subjected to the negative emotions (anger, disgust, fear and sad) impairment over positive emotions (happy and surprise).

Keywords — Emotion recognition, emotional impairment, facial expression, neurologic disorders