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EEG-based Emotion Recognition while Listening to Quran Recitation Compared with Relaxing Music Using Valence-Arousal Model

(Conference Paper)

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Abstract

Relaxation and calmness are two emotions that people always seek for. One popular method people used to do in order to reduce their level of tension and pressure is listening to some types of relaxing music. On the other hand, Quran is Allah's words that are ultimately given to us human to benefit of. Although, Muslims are strongly believed that listening to Quran or reading it brings them to comfort, pleasure and confidence. Scientific evidence is still required to prove that scientifically. Human emotion can be recognized from voice, text, facial expression or body language. But those methods are susceptible to change and are not really accurate. Recently, electroencephalograms (EEG) allowed researchers to evoke the inner emotions. This paper aims to study human emotions while listening to Quran recitation compared with listening to relaxing music. To evoke emotions, some stimuli should be used, in this research we implemented International Affective Picture System (IAPS) database. And for the emotion classification technique we followed two-dimensional Arousal-Valence emotion model. Finally the emotion model was implemented to recognize four basic emotions Happy, Fear, Sad and Calm with an average accuracy of 76.81 %. The data collected while listening to Quran and music were tested and the result generally showed that both Quran and Music are classified more into positive valence. © 2015 IEEE.

Author keywords

Arousal; EEG; emotion; Quran recitation; Relaxing music; Valence

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