Electroencephalography (EEG) signals considered a tool to discover brain activities where EEG signals allows researchers to investigate psychological mechanisms underlying perception and behaviour. Emotions are the psychological stages of feeling that can be .intertwined through circumstances, temperament, relationships, motivation, dispositions

The proposed system is (channel-based classification system and the band-based classification system) to classify EEG signals. The main idea of the proposed system is to explore the effect for EEG signal emotional recognition accuracy at various frequencies ranges theta- alpha- beta- gamma). And a various number of channels (4, 5, 10, 14, 18, and 32 channels). This proposed system for basic emotion recognition that analyzes EEG signals into the 4 bands used in and Discrete Wavelet Transform (DWT), and extracts energy and entropy for each (frequency band) as input to the classifier, It also uses .statistical features

The DEAP database is used In this research, which consists of EEG based physiological signals. A total of 32 participants. A total of 40 videos. All participants watched videos in a .sequence where each video lasted for 60 seconds

For classification EEG data two well-known classifiers were used the K-Nearest Neighbors Algorithm (K-NN) and Least Square Support Vector Machine (LS-SVM).The highest classification accuracy was using the K-NN algorithm for channels (4, 10, 14, 18, 32) in the four dimensions (valence, arousal , dominance, and liking). They are channel 18 (99.7656%, 99.7656%, 99.7656%, 99.7656%) respectively. While the highest classification accuracy for the frequency bands is the gamma frequency greater from beta and alpha and theta frequency for the four dimensions is (99.7656%). When using the LS-SVM algorithm, the database was divided into four groups (A, B, C, D). The results were the highest accuracy classification between two groups using the LS-SVM Algorithm is 99.56% between B vs. D. While the results of the highest classification accuracy among the three groups is 98.12% among A vs. B and D, and the results of the highest classification .accuracy among the four groups were 94.06% among A vs. B vs. C vs. D