"Emovsense"

A Hybrid Approach in Affective Computing for Emotion Based Video Analytics

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A dissertation submitted in partial fulfilment of the requirement for Bachelor of Engineering (Honours) degree in Software Engineering

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Informatics Institute of Technology, Sri Lanka in collaboration with University of Westminster, UK

2021

Abstract

Since the innovation of the microprocessor and the computer, researchers have been pushing the limits to make it similar to a human, currently a computer can speak, think, hear and even see but the only piece which is missing from the puzzle is emotions, and day by day we are getting closer to this reality as well, the study of emotion-based computing is termed affective computing.

Video production and marketing is one of the most demanding fields and the moment, and there is a high demand for content which are emotionally rich, however there are very few products which caters to this need of emotional based video marketing.

There are multiple methods in detecting emotions such as facial expression-based emotion recognition, physiological signals-based emotion recognition, speech-based emotion recognition and text-based emotion recognition. Through this research the author tries a hybrid approach using facial expressions and physiological signals such as heart rate and galvanic skin responses inputs to predict the user's emotion while a user is watching a video and also analyzing the video which is being watched for the emotions expressed by the characters in it and provide useful analytics for video creators so that they can produce more emotionally appealing videos.

Keywords: Affective Computing, Emotion Based Computing, Emotion Analytics, Video Creators, Facial Emotion Recognition, Herat Rate, Galvanic Skin Response, GSR ,Hybrid Approach