

Abstract

It is argued that for the computer to be able to interact with humans, it needs to have the communication skills of humans. One of these skills is the ability to understand the emotional state of the person. The aim of this thesis is to build a cost effective system for Real Time Emotion Detection using Facial Features. Built on the Convolution Neural Networks, our strategy takes the live Webcam feed and analyses the feed to compute the emotions of the people based on the model developed using suitable weights.

Behaviors, actions, poses, facial expressions and speech; these are considered as channels that convey human emotions. Extensive research has been carried out to explore the relationships between these channels and emotions. This paper proposes a system which automatically recognizes the emotion represented on a face. Thus a neural network based solution combined with image processing is used in classifying the universal emotions: Happiness, Sadness, Anger, Disgust, Surprise and Fear. Colored frontal face images are given as input to the system. After the face is detected, image processing based feature point extraction method is used to extract a set of selected feature points. Finally, a set of values obtained after processing those extracted feature points are given as input to the neural network to recognize the emotion contained.