

A Survey On Human Facial Expression Recognition Using Machine Learning

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Abstract: Emotion plays an important role in communication, social interaction, biometric security. It can display personal emotions and indicate an individual's intentions. Not only within people. If Humans want to interact with computers facial expression recognition is essential. Human brain's neural network is very complex to understand Many algorithms are used for recognition but they all lack in one thing that is accuracy. Generally Images and videos are used for recognition. But for effective recognition Head rotations and its positions are to be considered. With that the facial features like eyes, mouth, nose, lips can be extracted from face to identify emotion. Profile salient facial patches (PSFP) Algorithm can be helpful for precision in recognition. By using this algorithm facial landmarks can be detected easily and the slightest detail of the face can be determined. From this study the integration of information from facial expressions and the emotions of a human like natural, happiness, sadness, fear, surprise, disgust, and anger can be recognized by using algorithms like Profile salient facial patches (PSFP), Viola-Jones, Ensemble algorithm (Ada-AdaSVM), robust 3D head-tracking. This analysis can provides insight into artificial intelligence or machine intelligence that uses machine-learning algorithms to simulate the human brain.

Keywords: Facial expression, Emotion recognition, Head rotation, Image processing, facial dataset

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