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# Light Weight Emotion Recognition System of Facial Images using Convolutional Neural Networks

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**Abstract:** *Sentiment analysis, also known as sentiment research or sentiment mining, is the process of analyzing consumer generated online content (be it text, images, or video) to determine their mood. Images are a powerful resource where people can share their thoughts and share their experiences via social media. With the increase of social media users who regularly share their memes, videos and pictures, visual content analysis can help users better understand their views on the topic, problem or thing. Real time Emotional Intelligence has been a field of research. in the last few years. Facial expressions convey non-verbal information from facial interactions. The human machine interface plays an important role in automatic face recognition, which has attracted more and more researchers since the early 1990s. Inspired by this challenge, this paper introduces the Light Emotion Recognition (LWER) system using facial images from the FER (Facial Emotion Recognition) dataset provided in the Kaggle Facial Expression Recognition competition. The emotions depicted in the illustrations were divided into five categories: anger, fear, love, sadness, and happiness. Using a deep convolutional neural network (CNN), it recognizes and interprets the semantic information contained in the facial images. The LWER is based on two-part convolutional neural network (CNN): The first-part removes the background from the picture, and the second part concentrates on the facial feature vector extraction. Experimental results show that CNN can be used effectively for image recognition and the proposed method is proven to be efficient for emotion recognition.*

**Keywords:** convolutional neural network

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