Title: Suggesting Playlist and Playing Preferred Music Based on Emotion from Facial Expression.

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Abstract: Facial expression is a powerful indicator of human emotion and plays a crucial role in interpersonal communication. The mood of a person or his intention can be analyzed by detecting his expression. For detecting the expression, artificial intelligence and machine learning are very useful for automated detection. By analyzing facial features and expressions, a music recommendation system can predict the user's mood and recommend songs that align with their emotional state. Many researchers have worked on this.Our proposed system works on 8 moods of humans which are angry, contempt, disgust, fear, happy, neutral, sad, and surprise. This study utilizes a machine learning concept to achieve this goal. The methodology involves data collection, model training using a combination of Convolutional Neural Network (CNN) and VGG16 CNN, and recommending songs from the Spotify music dataset. The results show that both CNN and VGG16 CNN performed well in detecting facial expressions, with CNN achieving 66% accuracy and VGG16 achieving 92% accuracy. This system effectively recommends songs from the Spotify dataset based on the user's mood.

Keyword: Facial Expression, Emotion Detection, VGG16, Convolution Neural Networks (CNN), Optimizers.

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