Abstract

Facial expression plays an important role in human communication. Recognizing facial expressions helps robots to understand human emotions better and give responses precisely. It is challenging to recognize human expression accurately since it involves multiple disciplines such as psychology, computer science, cognitive science, engineering, and sociology. Many approaches have been proposed for solving facial expression recognition problem, among those methods, convolutional neural networks (CNNs) attract major attention because of their ability to extract features automatically and extraordinary performances. This paper proposed a CNN architecture inspired by VGG-16 which achieved a good result in solving the FER problem. In addition, this paper presents the design and implementation of a FER system using this CNN model.

Keywords: Facial Expression Recognition, Convolutional Neural Networks, VGG-16