

Towards Real-time Emotion Recognition

Emotion Recognition is part of human intelligence. Today's Artificial intelligence technology is spreading its steps towards emotion recognition. So, recognizing the emotion in real time has a more dynamic and effective impact on a lot of important sectors in our life. For Example, while driving a vehicle, a driver's real-time emotion can be detected. If we add this feature in the smart car, the car can take control of the vehicle when the driver is not in a healthy emotional situation for driving. This onboard detection will help us to minimize the accident and crash. This real-time emotion recognition has also impact on medical sectors (e.g. Automatic diagnosis of Autism Spectrum Disorder).

Motivated by this, we have developed a method for real-time emotion recognition. Here we have stated some previous related work from which we have inspired. We will show the databases which we have used for our research. Here we have used Transfer learning for training the dataset. For Base mode, we have used Inception V3 model and we added three more convolutional layers to build the whole network. For classification of emotion, we have done cross-dataset validation. We have also considered the gender-oriented classification. That means we have trained our network only on the female dataset and tested on the male dataset. This is done in order to develop a more generalized model of emotion, which can facilitate explainable AI. We have also shown a Realtime video on recognizing emotion.