

Video forgery detection using parallel convolutional neural network with visual attention technique

With the recent advancement in modern technology, one can easily manipulate a digital image or video using computer software or a mobile application. The purpose of editing visual media could be as simple as to look good before sharing to the social networking site's or can be as malicious as to defame or hurt one's reputation in the real world through such morphed visual imagery. It has become easy to alter and tamper the video content flawlessly by using easily available editing software in today's era. Thus, the authenticity of media resources is at high risk. Therefore, one must verify the video to detect the originality of that video content. To do this, a deep learning model is proposed that uses a parallel CNN model with visual attention technique. With parallel CNN model, deep features are extracted. It also calculates the distance of the correlation coefficient from the deep features, which helps to find the disassociation between the adjacent frames to identify video forgery. Visual attention technique is used to differentiate manipulated videos from real ones. The proposed hybrid model is beneficial in differentiating original and insertion type forged videos.