Effective and Fast Deepfake Detection Method Based on Haar Wavelet Transform

Abstract

Deepfakes are generally created using GAN. By using GAN it becomes very easy to create deepfakes in much realistic manner. ~~The method~~ Proposed method takes advantage of the fact that current deepfake generation algorithms can only create image with a certain resolution. It is only able to generate new faces with a limited size and resolution, a further distortion and blur is needed to match and fit the fake face with the background and surrounding context in the source video. This transformation causes exclusive blur inconsistency between the generated face and its background in the outcome Deepfake videos. A blur inconsistency detection scheme relied on the type of edge and the analysis of its sharpness using Haar wavelet is used in this method. This can determine if the face region in a video has been blurred or not and it will lead to the detection of deepfake videos.

Relevance:-

In our project we will use the blur inconsistency detection method to identify whether the image has been manipulated or not.