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Detecting Real Time Deep Fake Video Using Neural Network

Mithun P M[1] and Sindhu Daniel[2]
Student, Department of Computer Applications[1]
Assistant Professor, Department of Computer Applications[2]
Musaliar College of Engineering & Technology, Pathanamthitta, Kerala

Abstract: *Because of realistic deepfake production technologies are always being developed, it is extremely difficult to detect these videos. These deep fakes are getting better over time to the point that it is difficult to tell whether they are real or fake, making them harder to catch. Deep-fake technology will have some advantages, but it will also do a lot of harm. Nothing is more dangerous than people accepting these movies at face value in a time when truth is rapidly eroding. These deepfakes can be used for a variety of evil intentions, including defaming public figures, fostering political bias, sabotaging personal relationships, inciting fear and exploitation, and spreading misleading information. This issue is addressed in the research by offering a model that evaluates video frames using a deep learning approach to find discrepancies generated during video creation, such as differences in compression rate and facial feature consistency. The model, which can detect these embedded faults in the deepfakes, is trained using a convolutional neural network and transfer learning. These differences created during deepfake construction surrounding the face are used to train the neural network.*

Keywords: CNN, MesoNet, deepfake, conv 2D

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