**IMAGE FORGERY DETECTION**

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**INTRODUCTION:**

Forgeries are being done from histories but they are limited to only art and they were not a problem to the public. Due to the advancement in the image technology and software tools an image can be easily modified and manipulated. It needs much skill and effort to understand whether an image is being manipulated or not. There is a spectacular increase in these digitally manipulated forgeries in the internet and social media. This change indicates consequential unprotected risks and reduces the trustworthiness of digital images.

We are unquestionably living in a world where we are exposed to remarkable range of visual imagery. Though we have confidence in the integrity of digital images, today’s digital image technology started to diminish its trust. Verifying the quality of images and detecting traces of unauthorized alterations without requiring extra prior knowledge of the image content is an important research field. An effort is made to survey the recent developments in the field of digital image forgery detection.

With the advancement of the digital image processing software and editing tools, a digital image can be easily manipulated. The detection of image manipulation is very important because an image can be used as legal evidence, in forensics investigations, and in many other fields. The image forgery detection directs to verify the real and genuine digital images without being counterfeit.

Hence developing techniques and methods to verify the reliability of digital images is needed. Especially considering the need of digital images in the courts as evidence, as news items, as part of medical records, or as financial documents. So with the emergence of powerful image editing tools, handling images and changing their content is becoming an unsignificant task. With more than millions of images being uploaded to the internet daily, the move towards the paperless work and e-governance servers has increased, it is important to develop vigorous detection techniques to identify counterfeit operations and validate the credibility of digital images.

The survey covers image copy-move forgery, splicing, forgery due to resampling, and the newly introduced class of algorithms, namely image retouching. We particularly discuss in detail the class of pixel-based techniques which are the most commonly used approaches, as these do not require any prior information about the type of tampering. The paper can be seen as a major attempt to provide an up-to-date overview of the research work carried in this all-important field of multimedia.

The problem of image forgery detection arises from the increasing prevalence of digital image manipulation, which can be used to spread false information, manipulate public opinion, and deceive viewers. With the ease of access to powerful editing software, it has become easier for anyone to create sophisticated image manipulations, making it difficult to distinguish between genuine and manipulated images.

This poses a serious threat to the integrity of visual media, and there is a growing need for effective methods to detect and prevent image forgeries. The challenge lies in developing robust algorithms that can accurately identify manipulated images, even when the manipulations are subtle or sophisticated. Additionally, these algorithms must be able to handle a wide range of image types, including those captured by different devices and under different lighting conditions.