MAIN PROJECT

SEMINAR

TOPIC: FORGERY DETECTION

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ABSTRACT

The proliferation of digital image manipulation has raised concerns regarding the authenticity and integrity of visual content. Among these concerns, image forgery detection has become a significant area of research. In this seminar, we delve into the detection of image forgery with a focus on Aadhar image forgery.

We begin by discussing prevalent techniques used in digital image forgery, including JPEG compression, double JPEG compression, and pixel-based forgery methods such as cloning, re-sampling, and splicing. We explore various categories of image forgery, including pixel-based, camera-based, physical-based, and geometric-based forgery, shedding light on the methods employed and the challenges faced in detecting each type.

Furthermore, we review recent research papers and techniques related to digital image forgery detection, examining both active and passive detection methods. Techniques such as copy-move forgery detection, geometric analysis, and feature-based detection are analyzed for their effectiveness in identifying forged images.

We also present an algorithmic approach for creating an image forgery detection system, outlining the steps involved in preprocessing, feature extraction, and forgery detection. Additionally, we discuss the estimation of rotation angles for rotated images, an essential aspect of detecting geometric-based forgeries.

Throughout the seminar, we emphasize the importance of maintaining image authenticity and integrity, especially in critical applications such as Aadhar image verification. By understanding the underlying principles of image forgery detection and leveraging advanced techniques, we aim to contribute to the development of robust and reliable forgery detection systems.

ALGORITHM

Aadhar image forgery detection**, Convolutional Neural Networks (CNNs)** serve as a powerful tool for analyzing image data and identifying patterns indicative of manipulation. CNNs are deep learning models specifically designed for processing grid-like data such as images.

Convolutional Layers: These layers extract features from the input images using convolutional filters, capturing patterns and structures that are relevant for forgery detection.Tensorflow and keras are used to extract the features of the pattern.