

Document Forgery Detection using OCR and Deep Learning

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Abstract: *The integrity of textual information is paramount in domains such as banking, legal services, and digital identity management, where document forgery has emerged as a critical security concern. Traditional methods of manual verification are slow, prone to mistakes, and can't keep up with the increasingly complex nature of forgeries. Incorporating Optical Character Recognition (OCR) and Deep Learning models, this study introduces an automated framework for detecting document forgeries. Optical character recognition (OCR) is used to extract structural and textual information from digital or scanned documents, and deep learning algorithms look for visual and textual discrepancies to detect possible manipulation. To detect patterns of forgery in space, language, and context, the suggested method uses architectures based on convolution and sequences. Experiments on benchmark datasets show excellent accuracy, precision, and recall, proving the method's resilience to a variety of forgery techniques, such as text replacement, insertion, and style manipulation. The system offers a dependable way to improve document authentication procedures in financial institutions, e-governance, and forensic investigations. It is also scalable and flexible enough to accommodate real-world applications.*

Keywords: Document Forgery Detection, Optical Character Recognition (OCR), Deep Learning, Convolution Neural Network (CNN), Text Extraction, Image Processing, Computer Vision

