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VISUAL AUTHENTICITY IN THE AGE OF AI: IDENTIFYING AI-GENERATED AND EDITED IMAGES

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The visual reality is threatened because, in the era of Artificial Intelligence, everyone can edit and produce images, and therefore considers them authentic. Although AI can deceive the senses, it creates mathematical impressions. This paper presents a multi-model image forensic system; it is trained on mathematical analysis rather than AI-based detectors. The method analyses the image DNA using the histogram to detect lighting anomalies, pixel shifting to detect texture anomalies, and noise variance to check quantifiable sensor static. Experiments were conducted with original photographs made with a Samsung S23 using inbuilt image processing tools. The conclusion of the study is that there is a need to perform multi-layer forensic analysis in practice.