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| Title | A Novel Contactless Middle Finger Knuckle Based Person Identification Using Ensemble Learning | | |
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| Abstract |  |
| In Modern times, automated security for identifying a person is one of the main concerns. There is a significant need for a trustworthy and secure identity verification solution. A reliable way to identify someone can be using a biometric identification system. The finger knuckle pattern offers excellent discriminatory features for biometric identification with indirect touch, including the advantages of long-range visibility. Existing models are failing to handle the depth information in finger knuckles that are highly relevant to understand the identification patterns. Therefore, we elaborate on the significance of utilizing the middle finger knuckle for biometric identification. We propose an ensemble approach that appropriately captures the rich features to identify a person based on their finger knuckle. The proposed model performance is evaluated on a standard dataset (HKPolyU 3D photometric stereo knuckle image dataset). Experimental results illustrate that the proposed model outperforms the existing results. Further, this approach would be advantageous in forensic investigations, security, and surveillance. | |