

Touchless Palm Print Recognition System Using Image Processing

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A biometric system is a system that uses biometric data and mathematical algorithms to recognize a certain feature of an individual. In recent years, from various biometric identifiers, palm print has been widely used for identifying people. Palm print is popular nowadays because their ridges are larger compared to fingerprints. The use of palm prints has reawakened attention due to recent developments in image capabilities on mobile and wearable consumer devices, especially during the COVID-19 pandemic, and because it is good for privacy and sanitation. Further, it is more secure to use a touchless system rather than a touch-based system. So, a touchless system prevents society from using fake biometrics. In this paper, we design and develop a touchless palm print recognition system to verify people. In the proposed system people can verify themselves more accurately and quickly. This system contains two modules as Enrolment module and the Identification module. The Enrolment module is mainly used to store the palm print details in the database, and the Identification module system is used to verify people. Here we use the Gabor filter as the feature extraction tool and used IITD touchless palm print dataset.

Keywords: *palm print recognition, touchless palm print recognition systems, feature extraction, gabor filter*