Finger Vein Biometric Authentication using Deep Learning Techniques with Hybrid Labelling and Data Augmentation

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80_Recommendation

Light-weight models for real-time processing can be explored in the future. This allows FVR systems to operate in situations with limited resources, such as embedded systems or mobile devices. Another important area is to develop methods to identify vein patterns from visible light images. This facilitates a more flexible authentication for web based applications using the existing camera in tablets, smartphones, and webcams. A more accurate model can be developed by combining the information from near infrared and visible light images, which helps the system to utilize the advantages of both, thereby improving the performance. The security of the entire authentication system can be further improved by ensuring secure storage of tamper-proof records, and automated verification by smart contracts using block chain technology.