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(57) Abstract :
The present invention relates to a non-invasive method for detecting a person's blood group using fingerprint patterns, powered by a Convolutional Neural Network (CNN) deep learning model. The method involves acquiring a fingerprint image, preprocessing it to enhance key features, and feeding the processed image into a CNN model for classification. The system classifies the blood group, including ABO and Rh systems, based on unique fingerprint patterns. This method eliminates the need for blood samples, making it a painless, rapid, and cost-effective solution for blood group detection. The invention is particularly beneficial in resource-limited settings, emergency medical situations, and mass screenings, as it requires only a fingerprint scanner and a computational device. By automating the classification process through deep learning, the system ensures high accuracy, reduces human error, and provides faster results compared to traditional blood typing methods. Accompanied Drawings [Fig. 1-2]

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