

# Fingerprint Based Blood Group Prediction Using Deep Learning

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**Abstract:** Fingerprints are said to be the most accurate means of identifying an individual. In a court of law, fingerprint evidence is by far the most efficient and trustworthy type of evidence. Two key factors that demonstrate the effectiveness of finger prints are that the ridges that form during fetal development remain aligned throughout an individual's life until the skin decomposes, and that no two finger prints—those of the same person or two different people—are ever the same; they always differ in terms of pattern and ridge characteristics. Due to this unique attribute of finger print, it is widely considered as conclusive evidence in the court of law. This study presents an innovative methodology for the identification of blood groups by utilizing fingerprints and advanced machine learning techniques. Fingerprint patterns, renowned for their distinctiveness and enduring nature, serve as a significant biometric identifier. In this investigation, Convolutional Neural Networks (CNNs), a specific category of advanced machine learning, are utilized to extract intricate characteristics from fingerprint images in order to forecast blood groups.

**Keywords:** Fingerprint, blood types ,patterns, Deep learning

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